Becoming an LIDT Professional

Richard E. West & Heather Leary

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EdTech Books

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Dr. West's research focuses on developing educational institutions that support 21st century learning. This includes teaching interdisciplinary and collaborative creativity and design thinking skills, personalizing learning through open badges, increasing access through open education, and developing social learning communities in online and blended environments. He has published over 90 articles, co-authoring with over 80 different graduate and undergraduate students, and received scholarship awards from the American Educational Research Association, Association for Educational Communications and Technology, and Brigham Young University.

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Introduction to Becoming an LIDT Professional

Professional Development   Careers   Graduate Students

I (Richard) felt the anxiety bubble up inside me. It was my first day in a new graduate program—and first day in an entirely new discipline and career—and it was almost my turn to speak. Sitting in my first class, I listened as the teacher directed us to go around the room, introducing ourselves and telling each other "What it is you are interested in doing in this field."

I listened, amazed, as my peers said amazing things about their future careers:

"I am interested in developing technologies to enable video analysis for teacher self-reflection."

"I am interested in creating simulations to teach chemistry."

"I've been working as a cinematographer for indie films and am interested in applying these skills to education."

"I am interested in developing better approaches for designing instruction for multicultural audiences."

I was happy for my peers—and miserable for myself. I was young and having a quarter-life crisis, still searching for what I could be when I 'grew up.' When it was my turn, I simply said, "my name is Rick and . . . I'm interested in learning what I'm interested in!"

Our backgrounds as editors of this book represent the great diversity of people who enter the field to become learning and instructional design professionals. Richard was a literature major and former journalist. Heather was a photographer with a degree in fine art. Neither of us had what many might consider the "ideal" background to be learning and instructional design professionals and, for both of us, it took a little bit of time to find our way, direction, and passion within the field.

This book, in a sense, is written to our younger selves, but also to all newcomers to the discipline who wonder what their career could be in this discipline and how to best prepare for it. This book may not be a classic textbook assigned in courses, as it does not directly address any specific theories, processes, or problems of practice—although we feel maybe it *should* be recommended in a student's first course in a graduate program, as some earlier direction might help a struggling student find their way in the "metafield" that is learning and instructional design.

A Companion Book to *Foundations of Learning and Instructional Design Technology*

This book is a companion to the *Foundations of Learning and Instructional Design Technology* book*.* In the first edition of the *Foundations* book (see https://edtechbooks.org/lidtfoundations), there were six sections, with the first four presenting a foundation of understanding in the field (history, theory, media and technology, and design basics). The last two sections of that book provided a foundation to students' own personal journeys, helping them navigate professional issues, create plans for professional development, and learn about different potential careers.

The first edition of this text was an important milestone in the field as one of the first widely available open textbooks (see West, 2019 for the story of the process used to create the first edition). However, it was important to keep the content of the book updated, and new technologies (e.g., Edtechbooks) and movements within the field necessitated a revised, second edition. In revising the book, Dr. Heather Leary joins me as a co-editor. We decided the original book was too large, so we removed the last two sections of the book that were related to the personal career growth of the students, and that became *Becoming a Professional in Learning and Instructional Design Technology*.

In the current second edition of the *Foundations of Learning and Instructional Design Technology* book (see https://edtechbooks.org/foundations_of_learn) we used the metaphor of a tree to describe the need of understanding the roots of our discipline (the history and foundations), the trunk of the tree, (current topics), and the branches (the rising new professionals with their skills, interests, and abilities). This book represents a deep dive into the "branches" of our profession—meaning, this is a book for new professional and graduate students. You represent the future of our discipline! You are where our field will grow, and this book is our effort to assist you in that journey. And if the journey is, at times, bumpy—we have been there too! To fight imposter syndrome you might review *Failing Forward* (https://edtechbooks.org/failing_forward), which is a collection of many classic failures by professionals in our field, and how they recovered from these failures.

What is New in the Second Edition?

For this edition, we have asked authors to update their previous chapters to keep the information cutting edge. In addition, we solicited new chapter topics, and were pleased with the new content offered by skilled researchers, mentors, and practitioners in the field. We have divided the book into two sections: the first section is related to professional development, personal growth, and the skills/knowledge needed to emerge as a professional in the field; the second section of the book specifically discusses various career options in the field and how one might prepare to enter that specific career.

We hoped to address the questions that many students and new professionals have about how to succeed, but if there is an important topic missing, please suggest it (as well as potential authors) to one of the editors. To some degree, we consider this a living text, as we believe there are likely many questions that students still have that are unanswered.

Acknowledgements

We gratefully acknowledge the critical work of Rebecca Nissen on this book, as she served as copyeditor and instructional designer and enhanced the quality of every chapter in the book. Through this project, she has become a highly knowledgeable and skilled professional in the field in her own right!

Technology Features of This Book

There are many helpful features of this book that we have sought to provide as a book creation team, and there are other features provided by the EdTech Books system. We would like to make you aware of these, as they will enhance your learning of these topics. This book can be read online or downloaded as a PDF. A glossary of difficult or new terms can be found as needed in the book; access the definitions by hovering over the bolded terms while reading online. The chapters include learning checks allowing you to see if you understood the author's message. We encourage you to use these as you read. At the end of each chapter are surveys for you to rate the chapter. Please do so, as this helps us know which chapters are working well and which may need revision in the future. Because this book is licensed CC-BY, you may reuse, translate, or repurpose this book, as long as you attribute and link to the original.

Suggestions To Improve the Book

We welcome feedback on this book. Please provide a review on Amazon or through this link to have your review published here in EdTech Books. This helps other teachers know about this book so they can adopt it. If you find errors in the book, please email the chapter author or the book editors and we can fix those. If you have a suggestion for an important topic to add to this book in the next edition, please email your suggestion to the editors.

In addition, if you are a teacher or practitioner, and would like to contribute teaching materials to teach any of the topics in the book, please email the editors so we can share your materials with other instructors in the Instructor Materials Repository.

References

West, R. E. (2019). Developing an open textbook for learning and instructional design technology. *TechTrends*, *63*, 226–235.

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Lifelong Learning as a Learning and Instructional Design Technology Professional
Maximizing Your Academic Conference Experience Through Networking
PIDT, the Important Unconference for Academics
Where Should Educational Technologists Publish Their Research?
The Real World: Perspectives from IDs in Their Second Career
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Principles of Effective Advisor Mentoring

From New Student to New Mentor

Camey L. Andersen & Carolyn Andrews

In this chapter, we provide recommendations for choosing your advisor based on our survey of current and recently graduated Ph.D. and master's students' experiences. While all graduate students may not be able to choose their advisor, these principles can also be applied to working with assigned advisors or choosing additional faculty mentors. While we direct our discussion towards students choosing an advisor, these ideas may also be relevant to faculty members, particularly new faculty members, seeking to be good mentors. The graduate student who chooses their advisor with the criteria recommended can benefit from a graduate mentoring experience that will positively impact their academic degree, the research they discover and share, and the scholar they become

Introduction

Beginning graduate studies represents a pivotal moment in your academic journey. It entails enrolling in a new program of study or expanding on prior academic pursuits. Given the heightened expectations and demands of advanced scholarship, you brace yourself for more intensive and rigorous academic training than undergraduate studies. Additionally, you may move to a different academic institution, leaving behind the familiar and embracing the uncharted. While aspiring to gain knowledge and skills that will enable you to achieve your career goals, you may grapple with uncertainty about the trajectory of your academic endeavors. For those who are returning to academic life after a hiatus or work experience, readaptation to scholarly pursuits may present an added challenge. To navigate these unknowns successfully, you face a critical opportunity at the onset of your program—how to foster a positive and productive relationship with your graduate advisor.

What Is a Graduate Advisor?

Schlosser and Gelso (2001) defined a graduate advisor as "the faculty member who has the greatest responsibility for helping guide the advisee through the graduate program" (p. 158). These authors later expanded the concept of mentoring to include both guiding and mentoring the student through their graduate program academics and experiences (Schlosser et al., 2011). While advising might represent more general instruction that could benefit any graduate student, mentoring shows an advisor's personal understanding of the student and their goals, and the graduate advisor-mentor can effectively help guide them in a positive direction for their academic, personal, and career success (Montgomery, 2017). In this chapter, we adopt this more expanded concept of advising to include both guiding a student through a program as well as the more involved role of personal mentoring.

It cannot be understated how important a graduate advisor and their relationship with a student can be in helping them successfully navigate their program, complete projects and a dissertation, and graduate. Empirical research shows that positive student/advisor relationships are critical for doctoral program retention and completion (Brill et al., 2014; De Clerq et al., 2019). In many graduate programs, a student cannot choose their advisor, but in other programs, this is encouraged, particularly if the student is completing a thesis or dissertation. In many other situations, students may be able to seek out mentoring from faculty in their department for specific projects.

In all of these cases, choosing an advisor or mentor is one of the most essential decisions that a student will make to shape their graduate student experience. The magnitude of these life changes, combined with the United States' graduate student dropout rates, may trigger student anxiety instead of excitement for embarking on a new academic program. Studies have shown that between 40–50% of doctoral students will drop out of their program before defending their dissertation or being hooded at graduation and receiving their title of "Doctor" (Council of Graduate Schools, 2008; Lott et al., 2009; Sverdlik et al., 2018). However, proactively choosing an advisor from the beginning of your graduate program can help you set your academic course in the right direction from the beginning.

Importance of Graduate Mentoring

A Hoover and Lucas (2021) study showed the importance of graduate mentoring from the beginning of a program to improve student resilience and to help effectively direct students through the academic process. Exceptional graduate relationships can also make a difference in how you as a student feel about yourself and your ability to contribute to your field. Effective graduate mentors "enhance professional confidence and competence while decreasing isolation and strengthening belonging" (Johnson et al., 2022, p. 68). While all graduate students may not be able to choose their advisor, for those who can, research shows how much students are impacted by their advisors, as Barnes et al. (2012) reported: "Advisor characteristics appear to influence, at least in part, students' overall attitudes about their doctoral experience, the nature of the relationship that they experience or can experience with their advisors, as well as their ability to make progress toward their degrees" (p. 42). In choosing advisors, graduate mentoring relationships will affect your entire graduate student experience—for bad or for good. Your graduate mentoring relationships also contribute to how you will view your future success. Anderson et al. (2013) showed that student satisfaction with education and self-efficacy in their academic work is affected by the graduate mentoring they receive. Positive student-advisor relationships and mentoring are key for students progressing toward their educational goals, eventual graduation, and future.

What Matters Most in Choosing an Advisor

Realizing how important graduate mentoring is for program success, how should a graduate student choose their advisor when they have the opportunity to do so? Which qualities will lead to a successful student/advisor relationship, creating a positive experience in your graduate program (Blanchard & Haccoun, 2020; Buirski, 2021), meaningful research opportunities, and a successfully defended graduate paper or project? In this chapter, we provide recommendations for choosing your advisor based on our survey of current and recently graduated Ph.D. and master's students' experiences. While all graduate students may not be able to choose their advisor, these principles can also be applied to working with assigned advisors or choosing additional faculty mentors. While we direct our discussion towards students choosing an advisor, these ideas may also be relevant to faculty members, particularly new faculty members, seeking to be good mentors.

Description of the Survey

To inform our discussion in this chapter, we conducted a survey to learn more about how graduate students create and maintain effective advisor interaction through their graduate program. Of the 65 responses received, 42% were Ph.D. students, 36% were MS students and 23% classified themselves in an "Other" category, which included other master's degrees in related fields. Survey respondents overwhelmingly were in Instructional Design/Technology fields (83%), with the remaining 17% in "Other" Learning Science fields. Most survey respondents were current graduate students (63%),

while 37% had graduated. Survey respondents were 72% female and 28% male, with a widespread age-range of participants, the largest percentage of ages was (1) 31–40 (39%), then (2) 41–50 (25%), (3) 51–60 (17%), (4) 21–30 (15%), and (5) other ages (5%). The survey required participants to be current students or to have graduated in the last 5 years (since 2018). Most participants (63%) had not yet graduated, 14% graduated in 2021, and the other years were similar in distribution (2018—6%; 2019—6%; 2020—6%; 2022—5%). Current students indicated they expected to graduate in 2023 (31%), 2024 (17%), 2025 (12%), 2026 (7%), and 2027 (3%).

In choosing an advisor for their graduate program, 57% of survey respondents chose their advisor, while 43% had their advisor assigned to them. Most survey respondents stayed with the advisor they chose, with only 23% changing their advisor mid-program, while 77% stayed with their selected advisor.

What Makes a Good Advisor Relationship?

In the next few tables, we share what survey respondents believed to be the most important aspects of their advising relationship. These findings can be helpful for students in knowing what to look for in an advisor and for advisors to consider how they can be better mentors to students.

My advisor helped me	Percentage
Personally	49%
Professionally	59%
Academically	88%
My advisor didn't help me at all	8%

Table 1. The percentage of respondents who indicated receiving help from their advisors in one of four distinct categories.

Advisor Characteristics	Percentage
Personal relationship with student	28%
Professional expertise	20%
Accessibility/available to meet	17%
Project/thesis/dissertation support	11%
Knowledge of program policies and procedures	11%
Networking/Helpful with employment opportunities	6%

Table 2. Percentage of most important advisor characteristics by respondents.

Rank	Advisor Characteristics	Percentage

1	Personal relationship with students	28%
2	Project/thesis/dissertation support	25%
3	Project/thesis/dissertation support	22%
4	Knowledge of program policies and procedures	23%
5	Willingness to co-author publications/present	18%
5	Networking/helpful with employment opportunities	18%
6	Willingness to co-author publications/present	22%
7	Willingness to co-author publications/present	31%

Table 3. Rank order of most important advisor characteristics by respondents.

Characteristics of Strong Advising Relationships

As we reviewed the open-ended answers to the survey, five primary themes emerged that showed key characteristics graduate students perceived as essential to an effective student-advisor relationship: (1) academic support; (2) emotional support; (3) accountability; (4) information; and (5) networking/career recommendations (see Table 4). Sometimes, you may not be able to choose your advisor, and you may have an advisor who may not provide support in one or more of these areas. That is normal! However, understanding what an effective advising relationship can be may help you advocate for better advising in your program or ask for a new advisor that you believe will exhibit more of these characteristics. In addition, these findings can help a faculty member reflect on how they can better exhibit these characteristics in their relationships with their advisees. We will first present the overall themes and then discuss each theme.

Theme	Descriptions	Excerpts
Academic Support	This key theme means advisors help students in scholastic elements of graduate programs that lead to graduation. Academic support specifically includes help with dissertations, theses, or projects. It also includes providing opportunities for students in research and	"He explained every step I needed to accomplish. He gave me the 'insider tips' like getting each member of my committee to give me feedback well beforehand. He helped discuss the challenges I was facing and how I might navigate those."

	scholarship. Additional terms included: collaboration, expectations, feedback, partnership, publishing, research.	
Accountability	This theme means advisors provide systematic planning and tracking, including meeting and contact for completing milestones and program assignments. Additional terms included: accessibility.	"We meet every other week to discuss my project and for him to give me direction on what to do next."
Emotional Support	This theme means the advisor seeks a personal relationship with the student and academic help they provide. The student feels a connection with their advisor that helps them accomplish goals and move forward in their program. Additional terms included: communication, confidence, support.	"Provide the emotional support I needed to deal with the challenges of a Ph.D. program. There were many times when I felt like I was on a cliff, and I needed someone to back me down a bit and let me know things would work out and think of a game plan to overcome the current obstacle."
Information	In this theme, advisors provide students with needed program or school information, including information on advancement and program requirements. Advisors also provide advice for student questions related to the program. Additional terms included: advice.	"I would like more of an overall picture of what the process is like instead of always feeling unsure about what comes next."
Networking/Future Jobs/Career Recommendations	In this theme, advisors provide guidance and direction for students related to networking and their future jobs/goals and careers.	"More practical career advice and working with me to not only make sure my dissertation got finished but to have a solid step after graduation too."
Student Engagement (Belonging)	In this theme, students are seeking advisors' active engagement with them as students, in their work, and in their future. They are also	"I barely know [my advisors], and there isn't a desire to know them because they haven't tried to learn more about me.

	looking to advisors to help them find belonging in their graduate community.	
Not a Good Match	This theme means students changed advisors due to a mismatch of personality, research interests, or other factors. Additional term included: change of focus.	"I was assigned an interim advisor, but later connected with one that shared my same area of interest."
Advisor Left	In this case, the theme resulted from students changing advisors due to advisors leaving their graduate program for reasons such as a job change or retirement.	"My first advisor was retiring, and I couldn't finish my dissertation before he left."

Table 4. Results from the thematic analysis organized as eight themes, descriptions of each theme and examples of excerpts from the data connected to each theme. *Students could use these themes as topics in meetings with advisors. They could also use the themes as questions for potential advisors to better understand advising practices.*

Academic Support—A Foundation of Advising

You should look for effective advisors who give academic support throughout your program. In this study, the largest percentage of graduate students reported that their advisors helped them academically (88%) (see Table 1). In identifying what characteristics were most important for students in an advisor (first choice), four of the six categories related to academic help. Six of the top seven rankings in importance of advisor qualities are related to academic support (see Table 3). Academic support included helping to identify goals and creating a plan for academic success, as one student said, "My advisor has taken a personal interest in getting to know me and my academic goals and [helps] me to devise a plan to achieve them."

Progress Toward Degree Requirements

In choosing an advisor, ask yourself: *In what ways will they specifically help me move toward my degree?* Helping students engage in research and making progress towards degree requirements such as Ph.D. dissertations and master's projects was another key element of advisors' academic support. Another student described their advisor's academic support as "[Involving] me in research that they were pursuing. This provided me with an opportunity to learn practical research methods, processes, and logistics of a large research project in preparation for my dissertation research." Providing feedback as students move through their program is also an academic support role of advisors: "He mentored me and helped me through the academic process. He gave advice and critique to help me understand how and what to do." In this study, survey participants viewed academic support as an integral part of the advisor relationship. It is also important to ask, *as the student, what is my role in moving forward in the program?*

Ph.D. Dissertation and Master's Thesis/Project Support

Project/thesis/dissertation support was ranked among the most essential functions of an adviser (see Table 3) which makes sense since it is a key requirement for completing an advanced degree program. Survey responses showed that effective advisors helped students persist in their education and overcome challenges. One student shared about her advisor, "She did a lot to help me think through challenges. I tried to design the perfect study, but things always came up

that required me to pivot and try something different. It was hard to see how I could overcome these obstacles without her guidance."

Developing Expertise and Partnership

As students are proactive in their advisor relationship, they develop greater opportunities for learning and growth. Ideal advisor academic support should lead a student to develop expertise in the field (Erichsen et al., 2014; Orellana et al., 2016). As one student shared, "I would love to see a graduated mentorship relationship that went from structured to independent work. The framework of 'I do, you watch,' to 'I do, you help,' to 'You do, I help,' to 'You do, I watch' is a useful framework describing how a dissertation could be better scaffolded to build gradually student competence."

Another key component in the advisor characteristics (see Table 3) was partnership (Orellana et al., 2016; Jaeger et al., 2011). A student explained, "He treated me like a partner, offering help and guidance but letting me make decisions for myself. He enabled my projects and other efforts, but he didn't own them." Another student described the student/advisor partnership as "[respecting] my learning process." When academic advisors were most helpful to students, they let students 'own' their own projects but were available to help prepare students for defenses and final dissertation/thesis/project examinations. As a student shared about the academic support they received, "If I ever had a question, I knew I could reach out; I never felt abandoned."

Seeking Advisor Feedback

Previous research suggested the high value graduate students place on the depth of feedback advisors give on their written work (Abiddin & West, 2007; Overall et al., 2011; Pyhältö et al., 2015; Woolderink et al., 2015). As one student shared, "The professor I was with was not a good match. He did not show an interest in my topic and gave little feedback on how to adjust or improve it. When I changed professors to one that was more supportive, things went much more smoothly." Feedback is central to your development process from graduate students to becoming independent researchers (Inouye & McAlpine, 2019) and, along with other academic support, provides ideas about why an advisor's academic skills are essential to a positive advisor-mentoring relationship. Looking for these academic characteristics in an advisor can be helpful for students in choosing an advisor.

Suggestions for Students

If you are able to pick your advisor, try to pick one that has expertise in the area you are interested in. Realize that advisors can give the best advice and mentoring in areas of their specialty. Here are some suggestions:

- Review the faculty pages for faculty in your program. Have any had a previous career in an area you are interested in? Are any of their research topics interesting to you? Do they supervise experiences or internships that sound exciting?
- Ask other current and previous students what their relationships are like with their advisors. Do they give prompt feedback? Have they helped connect other students with internships?
- You might consider doing a small project with an advisor before committing to a full dissertation. You can often ask to be part of a faculty member's research group, and this can help you see whether you work well together. Oftentimes it isn't that one professor is a better advisor than another as much as whether their work style meshes well with yours.

Emotional Support: The Surprising Quality Often Most Helpful

Your choice of an advisor who will also provide emotional support is key to your overall experience as a graduate student. This study showed that only about half of graduate students felt they received emotional support from an advisor (49%) (see Table 1). However, students ranked emotional support as the most important quality in an advisor

(28%) (see Table 2). Students repeatedly shared how critical advisor emotional support was to their program's success. As one student shared, "[My advisor] actually knew me as a person and knew about my life. He supported me in academic and non-academic ways."

Identifying an Emotionally Supportive Advisor

Students benefit from seeking out emotionally supportive advisors—what does that mean? Advisor qualities that students saw as facilitating emotional support, including communication, were also important for the advisor's ability to support the student, "She was responsive, honest, personable, and really listened so I felt understood." In contrast, when students saw advisor qualities that did not facilitate emotional support, such as lack of student interest, they did not feel supported by the advisor: "I barely know them, and there isn't a desire to know them because they haven't tried to learn more about me." Emotional support was described by one student as the advisor seeing the positive in students: "It helps when the mentor is optimistic about the students' research and when he/she is encouraging every step of the way. It's also nice when they try to have a personal relationship with the student." Of course, it is unrealistic to expect perfection in an advisor. Each comes with strengths and weaknesses. It is important to get to know all the faculty and take the opportunity to learn from their experiences.

Why Emotional Support is so Important in Advising

As important as academic advising is for advancing in a Ph.D. or master's program, graduate students are seeking an advisor who will provide emotional support for them through the often uncertain and sometimes turbulent times of graduate work (Montgomery, 2017). As one survey respondent described the emotional support and mentorship their advisor offered, "Mentorship is understanding the strengths of the student and encouraging the student to progress. It's also important to find opportunities to encourage the student on things they are doing well. Simple words like, 'You're a strong writer,' or 'I see you made progress on this chapter,' [or] 'You're doing meaningful work" can go a long way and be the fuel to move students forward. Emotional mentorship is just as important as technical mentorship." An advisor's emotional support is particularly necessary when a student fails, or other situations lead to decreased confidence (Yob & Crawford, 2012). Yob and Crawford (2012) further described the emotional support benefits mentors can provide, saying, "When mentors bring to this situation both emotional support and academic guidance, students are more realistically able to reappraise their situation and make decisions about next steps" (p. 43). As one student said of their advisor, "He gave me confidence that I could succeed." Students must be willing to listen and let advisors support them in their journey.

Effective Student-advisor Communication

In our study, effective communication was also an important part of an advisor's emotional support (Artiles & Matusovich, 2020), and students who recognized the red flags of poor communication changed advisors. You may not always get assigned to an advisor who is the strongest fit. It is okay to change to advisors! As one survey respondent shared, "The previous [advisor] was not helpful at all. Rather, I have received harsh words and have been shut down from communication via email." Students should try to work through communication issues but acknowledge legitimate reasons to change advisors if necessary, and then change in a timely, professional way.

Students also need to be proactive in communicating with advisors when they have extenuating circumstances. Advisors cannot help you if you will not let them. In the research, emotional support was as important as academic support (Curtin et al., 2016; Ruud et al., 2018), and students should strongly consider this element of their advisor relationship. One survey response read, "[My advisor] actually knew me as a person and knew about my life. He supported me in academic and non-academic ways." As you let your advisor know how they can best support you, your advisor can better play this role.

Accountability: Keeping You On Track

Whether or not your advisor requires accountability from you may decide your progress in your program. Students ranked "accessibility/availability to meet" as the third highest characteristic for an advisor in the advisor rankings (see Table 2). In survey responses, these characteristics are closely related to similar terms for accountability. Students repeatedly cited "accountability" as a key characteristic for effective advisors. One student reported the most important thing their advisor did was "Regular check-in sessions to encourage, support, and help me with any issues that came up." Accountability was helpful for student progress even if students did not always meet their scheduled milestones, "He has continued to work with me and spend time with me reviewing my work even though my progress has been very slow." Students also shared that accountability meant the advisor empowered the student to succeed through their guidance and direction: "[My advisor] met with me weekly to provide feedback. [They] answered my questions. [They] let me take charge of my project."

Accessibility is Key in Advisor Accountability Role

Students should seek accountability from their advisors. Advisors encouraging student accountability in their graduate progress or providing accessibility/availability to meet (see Table 2) were among the principal issues for students in a successful advisor relationship. As one student shared, "[They met for] regular check-in sessions to encourage, support, and help me with any issues that came up."

While an advisor focus on accountability might seem counterintuitive to a positive student relationship, especially if the student was not performing ideally, another student shared why consistency, accountability, and their regularly scheduled check-ins were so critical: "[From the start of my studies] this has helped establish a great relationship and kept me accountable."

One survey response shared, "I wish he would have given me due dates. . . . for me, personally, having someone push me, or hold me accountable would have been nice." When advisors encourage students to stay accountable through their program, they build trust (Meyer et al., 2022), and the student realizes the advisor is counting on them to succeed. By helping you stay accountable, advisors encourage you to "keep [your] progress going" (survey response).

Suggestions for Students

Accountability is fundamental to staying motivated, positive, and focused on your goals, even when situations might be discouraging. It can also help to build confidence and create a sense of self-awareness as well as foster a sense of teamwork and collaboration. The following suggestions can help your advisor keep you accountable:

- **Set regular check-in sessions:** Meet regularly with your advisor for encouragement and support. Take the initiative to set the agenda. Discuss your goals, academic progress, and professional development. Ask for advice on your upcoming class schedule. Address any challenges.
- **Summarize the meeting:** Shortly after the meeting, summarize the meeting, identifying action items and next steps. Send it to your advisor.
- **Create an individual development plan:** Document your progress, keeping your goals and action items updated so you can measure your progress.
- **Ask for feedback:** Feedback is the impetus to improvement. Consider the feedback and develop an improvement plan.
- **Ask for help:** Don't waste time trying to figure things out on your own. Ask for help early on to make the most of your time in your graduate program.

Advisors as Information Resources: Helping You Progress

Many survey responses cited advisors being able to provide "resources" and "answer questions" as two of the most important advisor information types provided. An essential role of graduate advisors is to provide information for students as they navigate their programs. In the survey, one respondent described the ideal advisor role as "someone that I can count on to explain something that I am having a difficult time with" and another described an advisor as someone who [provides] information about opportunities I didn't know about." While students did not prioritize as highly the category "knowledge of programs and policies" (see Tables 2 & 3), survey comments still showed that graduate students valued advisors who could provide them with helpful and timely program information that moved them forward towards their degree. For example, one respondent shared that their advisor should "make sure I have the proper classes listed and answer a question about if I need a class or not."

Advisors' "knowledge of program policies" or "information" was also a top priority for students (11%) (see Table 2). This category ranked fourth highest in the student rankings of most important advisor characteristics (see Table 3). Student comments showed that they wanted their advisor to provide a clear understanding of their program's process and procedures: "I would like more of an overall picture of what the process is like instead of always feeling unsure about what comes next." When advisors provide clear information for students, it helps them have realistic expectations for their program requirements and be able to plan and set goals accordingly with minimal surprises (Rockinson-Szapkiw, 2014).

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Suggestions for Students

The following are suggestions on how to receive holistic support from your advisor throughout your graduate program.

- **Advocate for yourself.** No one knows what you need more than you. Take responsibility for your academic actions and decisions.
- **Be proactive in working with your advisor.** Ask for a meeting to share your academic and professional goals and discuss accountability measures.
- **Set goals from the beginning of the program and be flexible but stay focused on them.** Create a graduation plan with short- and long-term goals. Discuss plans regularly with your advisor and reevaluate goals as needed.
- **Manage expectations:** Discuss mutual expectations for communication and establish advising roles with your mentor.
- **Ask questions:** Ask questions about important program information. This knowledge will help you stay on track to graduation.
- **Suggest mentoring groups.** Along with several graduate students, consider forming a mentoring group with professors if they are not already a part of department advising (Bagaka et al., 2015). Groups could include discussing weekly writing progress, identifying conferences to attend together, or working on publications together.

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Advising for the Future: A Focus on Networking/Career Goals

You will not be a graduate student forever, and your advisor should be able to help you as you take the next step on your career path. Students reported that 59% of advisors helped them professionally (see Table 1). This category was last in students' most important advisor characteristics (6%) (see Table 2), but in the rank order of advisor characteristics, it tied for 5th highest priority (see Table 3). Students wanted more than only academic help from their advisor; they wanted support as they looked for post-graduate careers and opportunities: "More practical career advice and working with me to not only make sure my dissertation got finished but to have a solid step after graduation too." When asked what ideal mentoring looked like to them, many students cited advisors who helped them with networking and finding future jobs, "It's the advisor's responsibility to help students find full-time employment after the academic experience. That should be baked into the graduate program. All program faculty should try being aware of their student's professional trajectories and helping them network where they can."

Advisors Help Students Prioritize Future Career Options

Research has shown that effective advisors significantly impact student's future career choices and path (Gardner, 2010), including networking (Corsini, 2022). Study responses show the importance of students seeking out advisor guidance on career goals from the beginning of the program: "[My advisor helped] me think through my goals and navigate the options of how to fulfill them." Another respondent shared about their graduate student experience and how their advisor helped prepare them for a future career, "[They] asked me to think carefully about the subfield I was interested in and if I was ready to commit 3–4 years to studying that field intensely and make a career of it." Setting career goals and strategizing with an advisor about future jobs or networking opportunities can help a student focus in their program, take advantage of learning opportunities, and avoid unnecessary classes and aimless direction.

Survey responses showed that graduate advising career support should include more practical career support. Another respondent shared, "Now that I work in industry, I participate in daily stand-ups, sprint planning, creating timelines, etc. On one of my first days, I was asked to create a Gantt chart. I didn't know what that was. Those kinds of project planning experiences in addition to the mentoring would have been helpful." When students considered the ideal

advising experience, they wanted advisors who could "help me think through my goals and navigate the options of how to fulfill them." With their professional goals and networking as a focus, they were more likely to be prepared by their advisors to be qualified Ph.D.s and master's graduates with networking opportunities and credible job prospects, and less likely to have had the experience. This respondent shared, "I would have liked to see . . . more focus on preparing for next steps after graduation. For example, coaching on how to build a portfolio for jobs if going into industry or building up publications for academia. I was able to get a job . . . but those two things are pretty important for future jobs."

Suggestions for Students

Prioritizing career planning is important in a mentoring relationship. Ideally, you would begin discussing your goals for your career plans during your first mentoring meetings. Ask for help with career guidance and networking as you move through your program.

- **Evaluate your current skills and professional interests.** Compare your current strengths and competencies with those required for your desired career. Meet with your faculty advisor to create a well-structured career development plan that aligns with career aspirations.
- **Throughout your program, seek out advice from multiple advisors who can help you with networking.** Ask about an advisor's career journey. Be willing to explore different options through internships and introductory meetings with professionals in your chosen field. In early networking, be less concerned about a specific job and more open to learning, realizing that with your advisors' support, learning and networking can lead to the right career.
- **After graduation, stay in contact with your advisor.** Let your advisor know what professional field you choose and keep them updated in more detail than a social media post update. In addition to providing references, they can continue to be a mentor and can help you with networking and your career search in the future. Now as a colleague instead of a student, you may find new opportunities to collaborate with them as you advance in your career, benefiting both of you.

Conclusion

Pursuing your graduate degree requires a deliberate and focused approach. Your student-advisor relationship is a critical factor that can significantly influence your successful completion of your program and your future career path (Brill et al., 2014; Creighton et al., 2010; Lunsford, 2012). This study showed that graduate students can make essential choices in their degree progress that will positively impact their relationship with their advisor. When choosing an advisor, graduate students should prioritize the five strategies identified for positive advisor relationships in this study: (1) academic support, (2) emotional support, (3) accountability, (4) information, and (5) networking/career advice.

First, with the most significant survey results showing the importance of academic support to the mentoring relationship, you should verify that your advisor is a good match for you. You should prioritize creating a positive relationship with your advisor (Burkhard et al., 2014). Ideally, your research interests should align with your advisor's, or you should choose a research field the advisor can actively support and confirm that your advisor's feedback style will help you make progress in your program. A second important finding of this study is that an essential advisor quality for students was emotional support, even though less than half of students said their advisor had provided personal help for them. If students seek emotional support provided by their advisor, they may need to do more than wait for the advisor to reach out to them, realizing that the most effective mentoring may be "outside the lines defined by formal mentoring approaches" (Fries-Britt & Snider, 2015, p. 9–10). You can help facilitate emotional support with your advisor by seeking mentoring interaction that allows for more in-depth personal engagement between you (Black et al., 2004). These interactions may include get-to-know-you questions about challenges the advisor has overcome, mentoring

groups, partnering together in research, or other activities outside of the classroom organized by the department, but these personal mentoring experiences allow you to connect with your advisor in a more individual way and can enhance your overall academic experience.

As students carefully and intentionally choose their advisors, their pathway to graduation, though still an uphill climb, becomes a much more navigable course. You have an advocate to help you through the unforeseen difficulties of a dissertation, thesis, or project. You have a cheerleader to encourage you when you face personal and professional roadblocks along the way. You have an academic guide to help you be accountable with your writing on your graduate journey. You have an informed professor to provide you with the information and resources you need to stay on track for a timely graduation. You have a trusted advisor who sees possibilities for your future, understands your goals, and connects you with networking and career opportunities. The graduate student who chooses their advisor with the criteria recommended can benefit from a graduate mentoring experience that will positively impact their academic degree, the research they discover and share, and the scholar they become.

Mentoring Resources

The following mentoring resources may be helpful in choosing your graduate advisor and creating a plan to work effectively with them.

Mentoring Template Resources

- Duke University School of Medicine
- Florida State University Individual Development Plan Template
- ImaginePh.D. – Ph.D. mentoring planning tool
- Lehigh University
- UCCS Mentor Resources (including Mentor Agreement and Mentor Map)
- University of Georgia
- University of Michigan Sample Mentoring Agreement
- University of North Carolina Postdoctoral Student IDP Worksheet
- University of Nebraska Mentoring Plan
- University of North Carolina—Chapel Hill Mentoring Resources
- University of Wisconsin Mentorship Agreement Template
- USC Neuroscience Department Individual Development Plan

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Lifelong Learning as a Learning and Instructional Design Technology Professional

Ryan Watkins, Natalie B. Milman, & Michael Corry

After completing formal education, we as Learning and Instructional Design Technology (LIDT) professionals routinely ask the question, "what is next?" The structures of formal education (e.g., semesters, courses, assignments, etc.) provide a recognizable path for continuing our learning, but more formal education is often not an appropriate or feasible option after earning a terminal degree in the field. Moreover, considering continued developments in the LIDT field and its integration in nearly every job and sector in society, it is important to participate in lifelong learning and professional development to keep current with changes. For many, our LIDT professional associations provide workshops, training, and conferences that help us stay current with the latest developments. However, this is often insufficient, so developing skills and habits of lifelong learning are essential for success in the profession.

In this pragmatic chapter, we provide a foundation on which LIDT professionals can customize their lifelong, informal learning pathways using "mind"-sets, "skill"-sets, and "tool"-sets that are flexible enough to be applied even as new technologies, management approaches, and LIDT domain skills emerge. The tools we offer in this chapter can provide structures that help organize and track one's progress. These are not intended to be a formula, nor does one size fit all. You may find that using parts of one, mixed-and-matched with others, works best for you as you create a lifelong learning system smorgasbord.

Mindsets, Skillsets, Toolsets

There are numerous resources available to guide us in creating effective lifelong learning systems, and we categorize them in three groups: mindsets, skillsets, and toolsets. Each should contribute to your success as you learn to create your own structures for managing your learning.

What are LIDT Mindsets?

The concept of a "mindset" can be hard to pin down. Meier (n.d.) suggested that "Mindsets are the collection of beliefs and perspectives that make up the mental attitude, inclination, habits or disposition that predetermines a person's interpretations and responses to events, circumstances, and situations" (para. 4). For LIDT professionals, then, the mindsets we want to nurture for our ongoing development are those that will shape our professional actions to better support the accomplishment of significant and meaningful results within, for, and through the organizations where we work. That is to say, we want to nurture positive and productive attitudes regarding our work.

As an example, a valuable mindset for many LIDT professionals would be "systems thinking." Consequently, those professionals would seek opportunities to further understand the formal nature of systems (e.g., through books or journal articles) to grow their experiences working among complex systems (e.g., requesting cross-unit assignments) and/or reflect on the principles of systems theory they find in their projects (e.g., how the principle of equifinality benefits the discovery and consideration of more options). Other mindsets LIDT professionals might want to develop throughout their careers might include design thinking, creative inquiry, coalition building, global citizenship, critical thinking, and mental flexibility, among others.

Be purposeful in the mindsets you want to cultivate. These are attitudes and habits of mind that can be shaped. Linking those to your LIDT goals and ambitions can provide valuable targets and tools for assessing if your mindset development strategies are working.

What are LIDT Skillsets?

Skillsets are, fortunately, often easier for us to grasp and include in our professional development strategies. According to Herrity (2022), "A skillset is a combination of abilities, qualities, and experiences that individuals have that can be applied to perform tasks well. These can include soft skills such as interpersonal skills, organization, and leadership as well as technical skills such as research, computer programming, accounting, professional writing, and more" (para. 1). As such, skillsets can be newly learned, fine-tuned, or up-skilled over time. They can be applied daily or set on a shelf in our minds to be used when helpful and/or needed. When you gather LIDT professionals with different skillsets, they can form a team to identify and solve complex problems utilizing complementary proficiencies.

What are LIDT Toolsets?

As LIDT professionals, we use a number of toolsets—from processes, models, and frameworks; to software and applications; to the approaches we apply when implementing mindsets and skillsets. The tools we use are the conduits by which we can develop solutions in a structured manner. Many

times, the toolsets provide a channel to apply mindsets and skillsets in a way that is straightforward, clear, and effective. Just as an artist may have paints or chisels in their toolsets, LIDT professionals should have a variety of tools to meet the requirements of unique and complex challenges they encounter.

LIDT in the World: Developing the Mindset, Skillset, and Toolset of Computational Thinking

Mindset: Wing (2010) suggested that "Informally, computational thinking describes the mental activity in formulating a problem to admit a computational solution. The solution can be carried out by a human or machine, or more generally, by combinations of humans and machines" (p. 1). The development of abstract algorithms, for instance, is often associated with computational thinking—whether these algorithms are used in Artificial Intelligence (AI) systems or in creating a cookbook. Computational thinking is thereby a mindset that LIDT professionals can develop as a habit of mind they can use to interpret and respond to events.

Skillset: Computational thinking becomes actions through several skillsets that allow LIDT professionals to enact their mindset. While there are competing definitions of a computational thinking skillset, consistent to many are logical reasoning, algorithmic thinking, decomposition, generalization, patterns, abstraction, representation, and evaluation (Denning, 2017). Many of these are skills shared with other mindsets, such as systems thinking.

Toolset: The tools that can be utilized by LIDT professionals and others to apply their computational thinking skills include computer coding languages (e.g., Python, C++, R, etc.), various computer programs, cloud computing resources, and data visualization software.

LIDT in the World: Developing the Mindset, Skillset, and Toolset of Design Thinking

Mindset: Design thinking is "an analytic and creative process that engages a person in opportunities to experiment, create and prototype models, gather feedback, and redesign" (Razzouk, 2012), and is a mindset that you can apply in a variety of contexts. This includes the ability to rapidly prototype ideas and systematically test them to quickly learn what is working and not working for a particular group of users in a specific context.

Skillset: Razzouk (2012) suggested that when applying design thinking, skills in divergent thinking, teamwork, and maintaining a systemic vision can all be valuable. Since design thinking requires working with others (such as users/learners and coworkers), skills related to collaboration, emotional intelligence, and consensus building are valuable.

Toolset: Depending on the context, there are numerous tools that can support each phase in the application of design thinking. For example, video conferencing tools such as Zoom (https://zoom.us/) and Google Meet (https://meet.google.com/) can be valuable for brainstorming, as are whiteboard/sketchboard tools such as Miro (https://miro.com/) and Mural (https://www.mural.co/). Similarly, online crowdsourcing platforms, such as Amazon Mechanical Turk (also known as "Mturk," https://www.mturk.com/), can be useful for gaining feedback on ideas and early prototypes. Generative artificial intelligence (GAI, such as OpenAI's ChatGPT or Google's BARD) can often assist in comparing and contrasting ideas, creating prototypes, or improving how new ideas can be described to different audiences.

Frameworks and Standards

Now that you have a structure (i.e., mindsets, skillsets, toolsets) for organizing your LIDT lifelong learning system, the next item to consider is what to include in your professional development plans (i.e., documents detailing your short- and long-term career goals and strategies for achieving them). Since no single career path in the LIDT field is quite like another, you will want to consult a variety of frameworks and standards to determine which may work best to support your career goals and aspirations. You may, for instance, decide that technical skills from one framework would be valued in your organization, along with collaboration skills detailed in the standards of an LIDT professional organization. Below, we offer an assortment of frameworks and standards you can consider as you determine what comes next in your LIDT lifelong learning plans. Though some of these may be familiar to you, note that frameworks are often updated. Moreover, while we highlight several frameworks, these are only a range of options, and these may not be the best or only options for you.

Frameworks

McKinsey Global Institute, the consulting firm, identified 56 distinct elements of talent (DELTAs) that can be organized within 15 skill groups. The DELTAs are a mix of skills and attitudes and represent their predictions for the future of work.
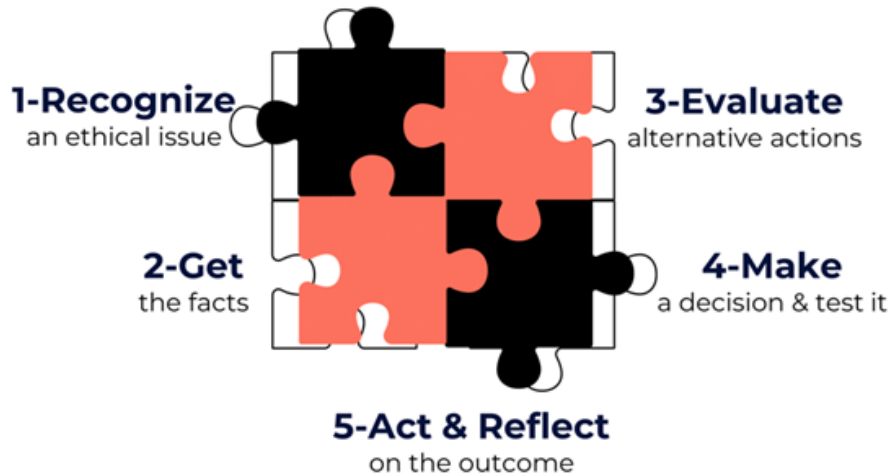
McKinsey Global Institute (2021)

Visit McKinsey and Company's page to view and read more about the 56 DELTAs.

Lehigh University (2023)

While we use the McKinsey framework as the foundation for the examples that follow, there are other frameworks that you should consider as you determine which is most appropriate for your career. These include, for example:

Framework for Ethical Decision Making

1-Recognize an ethical issue

2-Get the facts

3-Evaluate alternative actions

4-Make a decision & test it

5-Act & Reflect on the outcome

Markkula Center for Applied Ethics: *scu.edu/ethics*

Figure 2. "MSP Flowchart" by Office of Creative Inquiry, Lehigh University is used with permission.

Brown (2013)

Read page 2 of The Government of Alberta's Framework for Student Learning: Competencies for Engaged Thinkers and Ethical Citizens with an Entrepreneurial Spirit as referenced in Brown (2013) to view and read about the Twenty-first century skills framework for student learning.

Talent Development Capability Model (ATD, n.d.)

The Association for Talent Development developed the talent development capability model (ATD, n.d.), which consists of professional, personal, and organization capabilities, as Table 2 shows. Each category lists a series of capabilities for individuals to cultivate, such as communication or instructional design.

Professional Capabilities	Personal Capabilities	Organizational Capabilities
- Learning Sciences - Instructional Design - Training Delivery and Facilitation - Technology Application - Knowledge Management - Career and Leadership Development - Coaching - Evaluating Impact	- Communication - Emotional Intelligence and Decision-Making - Collaboration and Leadership - Cultural Awareness and Inclusion - Project Management - Compliance and Ethical Behavior - Lifelong Learning	- Business Insight - Consulting and Business Partnering - Organization Development and Culture - Talent Strategy and Management - Performance Improvement - Change Management - Data and Analytics - Future Readiness

Table 2. Major Categories of the ATD Capability Model (ATD, n.d.)

Frameworks, including those presented above, can be fairly general and are primarily intended to be used as structures for organizing information that would otherwise be too diffuse to be of value. The elements of the frameworks routinely represent broad areas of professional development (e.g., humility, coaching, digital literacy) rather than specific skills. This allows the framework to be of value across many professions and to people at various stages of their careers, though further analysis will be required to define what should be included in your individualized professional development. For instance, if digital literacy is an element from the McKinsey framework that you would like to include in your professional development plans, then you will have to determine what aspects of digital literacy are most applicable to your career and organization, as well as your desired level of proficiency. One additional value of a framework is that it will typically cluster elements for your consideration. For example,

digital literacy is also connected with digital learning, digital collaboration, and digital ethics in the McKinsey framework—and thus you may want to also consider professional development opportunities that connect with these elements as well.

Professional Standards

In addition to frameworks, as presented above, professional associations also routinely develop standards. These standards establish and document norms, rules, and expectations that govern the behavior and performance of individuals in the particular profession. These can also be useful guides for determining what professional development will be most valuable within LIDT. Three leading professional associations with standards are outlined in Table 1.

Association for Educational Communications & Technology (AECT) Instructional Design Standards for Distance Learning (Piña, 2018)	International Society for Performance Improvement (ISPI) Performance Standards (ISPI, 2023)	International Society for Technology in Education (ISTE) Standards: Coaches (ISTE, 2023)
Standard 1: Purpose Standard 2: Assumptions Standard 3: Sequence Standard 4: Activities Standard 5: Resources Standard 6: Application Standard 7: Assessment Standard 8: Reflection Standard 9: Independent Learning Standard 10: Evaluation	Standard 1: Focus on Results or Outcomes Standard 2: Take a Systemic View Standard 3: Add Value Standard 4: Work in Partnership with Clients and Stakeholders Standard 5: Determine Need or Opportunity Standard 6: Determine Cause Standard 7: Design Solutions including Implementation and Evaluation Standard 8: Ensure Solutions' Conformity and Feasibility Standard 9: Implement Solutions Standard 10: Evaluate Results and Impact	Standard 4.1 Change Agent Standard 4.2 Connected Learner Standard 4.3 Collaborator Standard 4.4 Learning Designer Standard 4.5 Professional Learning Facilitator Standard 4.6 Data-Driven Decision-Maker Standard 4.7 Digital Citizen Advocate

Table 1. AECT, ISPI, and ISTE Professional Standards

Depending on the robustness of the association, professional standards may be supported with lengthy descriptions and curriculum resources for professional development. Workshops based on the standards are also often available online or at association conferences. More robust standards may additionally include assessments and certifications, such as ISPI's Certified Developer of Training and Certified Performance Technologist. Likewise, professional associations may certify academic programs that support the development of their standards.

How to Use Frameworks and Standards

The frameworks and standards above may provide you with ideas for your professional development. They are not the only ones available, nor are they inclusive of everything that you may want to include in your lifelong learning plans. You should pick, choose, combine, and modify these as you see fit—customizing them for your career goals and context.

Lifelong learning plans should include a mix of short-term goals (e.g., learn how to use a tool over the next 3 to 9 months) and long-term goals (e.g., growing your entrepreneurial mindset over the next 3 to 5 years). It is typically easiest to think long-term first and to focus on mindsets you want to develop. Then you can explore skillsets and toolsets that will support you in developing the long-term mindset. Volpe (2023) recommends that you "take a page from the educational system and divide the future into 'semesters'—traditionally 15 to 17 weeks long at American colleges—in which to implement minigoals to help get you where you want to go" (p. 1).

If, for example, one of your long-term goals is to develop a mindset of collaboration (from the McKinsey framework), then you can begin to create a 3-year plan for how that will take hold. This may involve, for instance, connecting with a coach (formal or informal) who will help guide you through the journey during year one while also completing a survey of digital collaboration tools typically used in LIDT projects in 'semester' one. You may also begin to grow your network of potential collaborators by attending a professional conference as a learning activity in 'semester' two. Then in year two, you might plan to attend a workshop to learn how to use various digital communication tools effectively, or participate in a collaborative project for a local non-profit, to build some foundational skills. In year three, you may want to expand your toolset by completing a free, online course

about a second collaboration platform, or by systematically reading the performance literature on how to lead globally dispersed teams and then requesting opportunities to work on collaborative projects at work.

You also do not have to "master" every one of the mindsets, skillsets, or toolsets you include in your plans. You may, for example, decide to learn a little about Python code so you can be better engaged in conversations with technical staff, but not learn enough to contribute to the actual code development. In contrast, you may determine that improving your negotiation skills is very important and decide that taking a weeklong intensive workshop is worth the investment. Your plans will include a number of mindsets, skillsets, or toolsets, and you will want to balance those by determining just how much time, money, and energy you believe is necessary to accomplish your desired level of proficiency (see Box 3).

Learn About Proficiencies

In constructing your professional development strategy, each chosen mindset, skillset, or toolset should be aligned with the desired level of proficiency that will optimally contribute to the realization of your career and personal objectives. Within the McKinsey framework's concept of "programming literacy", for instance, the degree of proficiency you aim for may vary significantly. You may find that a broad understanding of the various programming languages and their primary applications suffices for your purposes. Conversely, others may find it necessary to seek mastery in programming to fulfill their individual goals. Here are four proficiency levels developed by the College and University Professional Association for Human Resources (n.d.) to consider as you chart your developmental journey:

1. **Awareness:** the ability to recognize the common knowledge or understanding of a
2. competency. The individual has the level of experience acquired by fundamental
3. training, formal education, and experiential learning.
4. **Application:** the ability to successfully complete tasks as requested and without assistance. On most occasions, the competency is performed independently. Occasionally, the individual initiates action or makes rudimentary improvements without being prompted.
5. **Mastery:** the ability to provide guidance, troubleshoot, and answer questions related to this area of expertise and the field where the skill is used
6. **Influence:** the ability to look beyond circumstances or title to spark change in actions, behavior, processes, and relationships to achieve a common goal that is strengthened by trust (ex. demonstrates exemplary leadership by modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart)

(College and University Professional Association for Human Resources, n.d., p.1)

As you create your lifelong learning journey, you can create pathways that build to your desired level of proficiency with each mindset, skillset, and toolset. You may, for instance, want to start on the path toward mastery of a "win-win negotiation" skillset with low-resource activities (e.g., subscribing to blogs, newsletters) to build awareness. Then after six months of becoming familiar with the terminology, trends, and opportunities for professional development, you may consider planning for developing negotiation skills that you can apply over the next 12 months. Finally, you can explore the next steps (which may, at times, lead you to formal training or workshops) to gain mastery-level proficiency.

We often find it helpful to track resources for each mindset, skillset, and toolset for later use. For instance, creating a spreadsheet where you can manage a list of blog posts, books, podcasts, webinars, workshops, contacts, and websites. You can create a separate list for each of the mindsets, skillsets, and toolsets on your lifelong learning plan. Staying organized will help you manage your time and resources throughout your journey.

An Individual Development Plan (IDP) is a tool for documenting your accomplishments, as well as your short- and long-term goals aligned with outcomes and timelines. It can also be used to periodically document your achievements (e.g., annually or every 6 months), offering a great opportunity to reflect on your progress. After which you can use the IDP when discussing your goals, professional development, strengths, and areas for growth with your supervisor. IDPs are used in many fields. In 2013, the National Institutes of Health (NIH) issued a notice encouraging graduate education programs to use IDPs "to assist graduate students and postdoctoral researchers to achieve their career goals" (para. 1). Although the NIH notice promotes the use of IDPs with PhD students who are in the biomedical fields, it is a valuable tool for anyone at any career stage—including LIDT professionals.

Some suggested components of an LIDT IDP include, but are not limited to, short- and long-term goals, strategies for accomplishing your goals, timelines, and outcomes (see Table 1). It can also be shared in a simple text-based format or by using a variety of media in a digital professional portfolio.

Goal (i.e., what)	Mindset, Skillset, and/or Toolset	Strategy (i.e., how)	Outcome(s)	Timeline (i.e., when)
E.g., Improved public speaking	E.g., Skillset	E.g., Join local Toast Masters	E.g., Present at annual meeting	E.g., 12 months from today

Table 1. Individual Development Plan

Using a framework similar to Table 1 as a guide, create your own individual development plan for the next year or two of graduate school. What goals do you have? What mindsets/skillsets/toolsets will you need to accomplish those goals? What strategies will you use and how will you know when and how you have accomplished your goal? Share your IDP with your adviser or mentor, and ask for their feedback on your plan.

Evolving Over a LIDT Career

Though the mindsets you want to pursue in your lifelong learning are long-term goals that can span years or even a decade, the skillsets you want to develop at various points during your LIDT career will change routinely. For example, you likely cannot master a critical thinking mindset by taking a weekend workshop or even a semester-long course. Mindsets are foundational and take time to develop.[1] Skillsets, on the other hand, can often be attained in a relatively short period of time, depending on your prior knowledge, experience, and motivation. For instance, if you want to cultivate skills for conducting effective focus group interviews or managing project budgets, you can achieve those through self-study, workshops, or coaching.

Early-career

It is important for early-career LIDT professionals to cultivate a diverse set of skillsets and toolsets that are useful in their current roles and/or desired roles/responsibilities and career paths. From computer skills for managing Learning Management Systems to instructional design for creating authentic assessments, there are many opportunities for including skillset and toolset development in your lifelong learning plan. This is especially true when you have recently completed your formal education because it may be easier to build these skills through organized courses. We encourage you to intentionally increase the number of self-study or self-directed learning opportunities you create each year (see Young, 2023, for examples).

In the end, you do not want to depend only on formal learning experiences (e.g., workshops, bootcamps) for all your skills development—balance is important. Moreover, there are many skills that are best fostered incrementally over time. Just as building professional knowledge takes time, so does cultivating your skills. However, if you fail to incorporate professional development purposefully, you will likely fail to develop professionally—unless your employer requires it. You may want to begin with small projects, even those outside of your work, to develop foundational skills. Then as your skills grow, you increase the complexity of the skills you are developing and start to showcase your new skills in the workplace. Early in your career is also a time to build your reputation (by demonstrating teamwork, integrity, loyalty, receptivity to feedback, work ethic, etc.) and identify the beginnings of a niche of expertise.

Mid-career

Mid-career LIDT professionals may want to shift from developing skillsets and toolsets to developing mindsets. As mid-career professionals, it is routinely time to cultivate mindsets that are valuable in coordinating and managing teams on increasingly complex projects. As you manage teams, project management skills become much more important to your success and the success of your projects. For instance, to develop your project management skills related to virtual team management, you may wish to set specific improvement goals, such as "improve team collaboration and communication." Similarly, giving constructive feedback and reflecting on your achievements related to your goal(s) will be essential. You will quickly learn the requirement for and importance of good project managers. From formal workshops to connecting with a coach, improving your project management skills can become a routine part of a mid-career LIDT development plan.

Late-career

Late-career LIDT professionals also want to consider lifelong learning goals. At this point, the focus of your lifelong learning plan may shift to mindsets, skillsets, and toolsets that lie outside of your organization. For instance, the development of a global citizenship mindset might be paramount during this phase of your career. You might ask yourself, "How can I make a global impact in the LIDT field?" One way might be mentoring early- and mid-career LIDT professionals inside or outside of your organization. Taking on leadership roles within professional associations is another way to make a larger impact. Another consideration that many late-career LIDT professionals entertain is their civic footprint on education. It is a time when you want to leave a positive legacy for those to come. You want to leave your colleagues, organization, and field in better shape than when you entered it. This mindset leads to a key time in your career when mentorship of early-career LIDT professionals is increasingly important, involving sharing of what you have learned over the years.

Conclusions and Next Steps

Lifelong learning does not equate, of course, to continuous enrollment in universities. But how does one make the transition from being a student in a formal education setting to being the creator, student, manager, and evaluator of one's own lifelong learning? It begins with one's commitment to continuous learning and improvement. This is not to say that taking breaks from time to time is frowned upon; in fact, it is important to take breaks. However, like even the best of vacations, at some point we must return to work. In this chapter, we offered several types of structures that LIDT professionals can use to manage these transitions as they move from being a student in the formal educational system into being a lifelong learner in their own education system.

For many, however, commitment to continuous learning and improvement is similar to the typical New Year's resolution—lost in the chaos of everyday life. Using the frameworks and standards discussed in this chapter, you can begin to structure the mindsets, skillsets, and toolsets that you want to develop and create concrete plans for how those goals can be achieved.

Footnote

[1] Robbins (n.d.) suggests these 5 steps to changing mindsets: challenge your limiting beliefs, face your fears, shift your perspective, change your self-talk, and get support.

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Maximizing Your Academic Conference Experience Through Networking

Jered Borup, Leanna Archambault, & Cecil R. Short

Jered Borup, Leanna Archambault, and Cecil Short share their experiences with conference networking. They offer tips, strategies, and experiences to make networking at conferences a little less daunting. The 4Ps of conference networking - Prepare, Provide, Participate, Pursue - can help you to make the most of networking opportunities.

Conferences provide important networking opportunities, but too often, these opportunities are not maximized. Admittedly, networking can be challenging for many—including us. This is especially true when you are new to the field and attending academic conferences for the first time. Personally, the three of us are in different stages of academia, including Professor (Leanna Archambault), Associate Professor (Jered Borup), and Assistant Professor (Cecil Short). While writing this chapter, we also reached out to the following colleagues to learn from their networking experiences:

- Curtis Bonk—Professor at Indiana University Bloomington
- John Curry—Professor at Idaho State University
- Tonia Dousay—Dean of the School of Education at University of Alaska Anchorage
- Mohammad Shams Ud Duha—Graduate Student at Purdue University
- Charles Graham—Professor at Brigham Young University
- Elizabeth Langran—Professor at Marymount University
- Patrick Lowenthal—Professor at Boise State University
- Florence Martin—Professor at North Carolina State University
- Rob Moore—Assistant Professor at University of Florida
- Larisa Olesova—Clinical Assistant Professor at University of Florida
- Thomas Reeves—Professor Emeritus at University of Georgia
- Mary Rice—Assistant Professor at University of New Mexico
- Rick West—Professor at Brigham Young University

Based on our experiences and those of our colleagues, we developed the 4Ps of conference networking that can help you to make the most of networking opportunities before, during, and after the actual conference date:

- **Prepare** before the conference.
- **Provide** ongoing service.
- **Participate** in a variety of activities during the conference.
- **Pursue** networking opportunities after the conference.
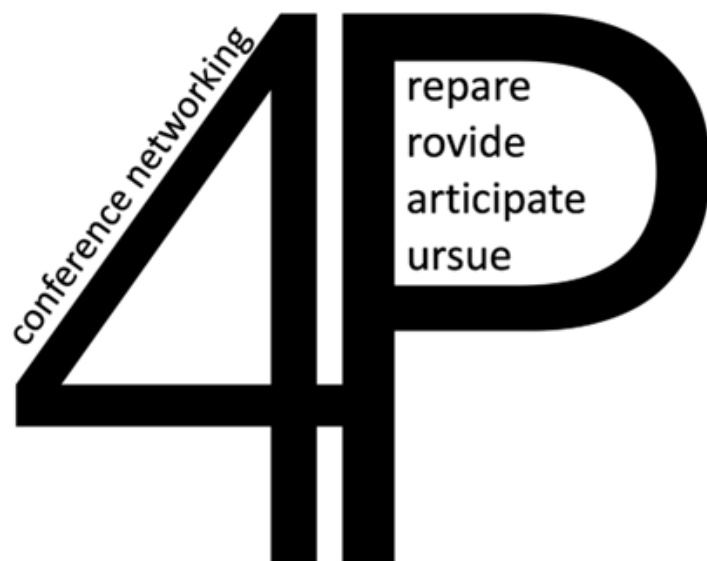
Figure 1. 4Ps of Conference Networking

For each P, we aim to offer tips, strategies, and experiences to make networking at conferences a little less daunting, whether you are new to conferencing, a well-seasoned veteran, or somewhere in between.

Prepare

Taking the time to *prepare* for a conference is important for everyone, but it is especially important for first-time conference attendees. That said, it is not possible to do everything. Consider which of the following suggestions might be most helpful.

Create Conference Goals

Knowing your goals for the conference will directly influence how you prepare. Examples of conference networking goals may include:

- meeting experts
- finding future colleagues/collaborators
- conducting a job search
- gathering project ideas
- sharing your research
- getting involved with the organization

Meeting new people can establish future collaborations. In fact, our first project together as authors resulted from a conference discussion! If you attend conferences to meet people in your field, you will want to prepare ways to introduce yourself and keep track of who you meet. Be ready to exchange business cards. In recent years, people have created digital business cards through services like HiHello, Dibiz, or Haystack. Tonia Dousay has found that digital business cards are helpful because "people may not carry business cards or a pen/paper, but they will likely have a phone. And the phone camera can scan a QR code that displays/saves preferred contact info."

Tonia Dousay in her office preparing for AECT

Changing Goals Over Time – Cecil Short

When I attended my first academic conference as a doctoral student, I knew that I wanted to have a future in academia. As such, I had very specific goals for this conference. First, I wanted to meet the scholars who were doing foundational work in my field of interest. At that first conference, I presented with Michael Barbour and had dinner with Leanna Archambault, Jered Borup, Kathryn Kennedy, and many others with whom I would work with in the future. Second, I wanted to get involved in the conference so I could become recognized as a potential leader. I attended a Special Interest Group (SIG) meeting, and made valuable connections with the leaders of that group. When I attended the same conference in 2019, I was elected as a co-chair of the group. I had a similar experience with a different conference when I voiced my interest in running for a communications position within the SIG and was elected the following year.

Having met these two goals, I set a new goal for myself and began going to conferences to seek collaboration opportunities. This led me to meeting other leaders within SIGs. I published a book with Jered and Leanna, whom I met at my first conference, and through my interactions at a different conference, I co-edited a special issue of *TechTrends*, become co-editor in chief of the *Journal of Technology Integrated Lessons and Teaching*, and co-author of numerous presentations and publications. And it all started by knowing what I wanted to accomplish when attending the conference.
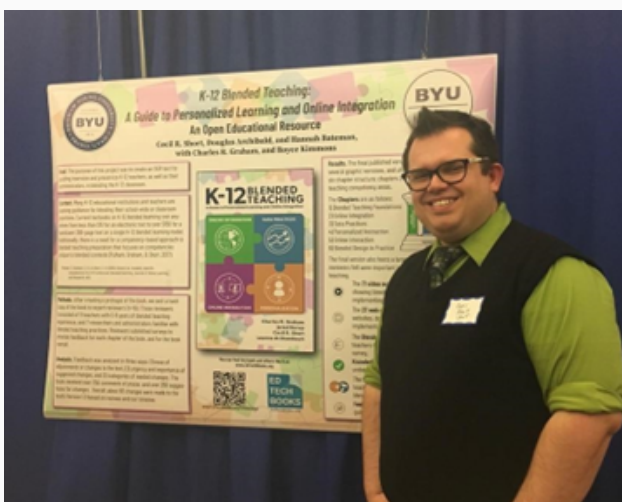
Cecil Short sharing a poster presentation in 2019

If you are on the job search, introducing yourself to potential colleagues and co-workers may give you an inside scoop on upcoming positions. If there is an open position that you are interested in, make plans to connect with faculty on the search committee or others at the institution to learn more about the position. Some conferences will also have a job board posted with openings and contact information of the search committee members attending the conference.

If one of your networking goals is to share your work, you will need to begin preparing proposals for various session types. Understanding the various session types can also help you determine which sessions to attend. The following are common presentation types:

- **Research papers and best practices presentations** allow you to share and pique interest in your research and/or practice. These sessions have mostly unidirectional communication but provide a few minutes for discussion at the end. Some of the best networking opportunities occur as hallway conversations after these sessions. On the last slide of your presentation, share your contact information and encourage people to follow up.
- **Poster presentations and round table discussions** typically occur in a conference hall and are centered on multidirectional discussions usually focused around works in progress. As a result, they offer some of the best networking opportunities and allow you to gain helpful feedback.
- **Panel discussions** can have unidirectional communications coming from a group of experts sharing/debating thoughts or have more multidirectional discussions between attendees and the panelists. Participating in or attending a panel is a great way to network with multiple people focused on a particular topic.
- **Workshops** are meant to be the most hands-on and collaborative sessions. They are great for learning something new or refining something you already know. However, they also often come with additional costs and time commitments, limiting the number of people you can network with.

Create Your Conference Schedule

Once you know your networking goals for the conference, you should create a conference schedule that reflects your goals. If you aim to meet specific people, you should find out when they are presenting and build your schedule accordingly. Likewise, if you are attending to learn about a specific topic, you should search the schedule for that topic and use it to drive the creation of your schedule. Some people wait to make their schedule the night before the conference, while others plan out which sessions to attend well in advance. A final group of attendees embrace the chaos of the conference and plan where to go on a moment-by-moment basis. Your approach should ultimately be informed by your goals for attending the conference.

Provide

As the popular adage goes, "What you put into something is exactly what you get out of it." It is important to keep in mind that what you get out of a conference is largely dependent on the investment you make in the event itself. There are a number of ways to *provide* service to the conference along with the professional organization running the event. These in turn offer networking opportunities at the event and throughout the year.

Review Conference Proposals

Serving as a reviewer for the conference is a good-will gesture that helps to familiarize yourself with the topics, themes, and various formats of submissions. It is also a great way to get engaged with the conference prior to the actual event. Regardless of your years of experience in academia, your insights can be valuable in helping conference planners select sessions for the conference, though some conferences may require first-time reviewers or student-reviewers to work alongside a mentor. Depending on the conference, reviews can take anywhere from a few minutes to an hour.

Each conference handles proposal reviews a little differently and will commonly provide useful guidelines and instructions on their website. If you are struggling to find information on becoming a reviewer or how to review, reach out to conference leadership. Generally speaking, they are always looking for quality reviewers.

Volunteer at the Conference

You may also want to consider providing volunteer service at the conference itself. There are formal volunteer opportunities arranged in advance and those that come up more organically while at the conference itself. At many conferences, formal volunteering agreements can be made prior to the start of the conference and offer a way to have registration fees reduced or waived. Not only does volunteering help financially, it also offers networking opportunities while you do things like working at the registration/help desk, acting as a judge for the poster session, and being a presider for various sessions. These roles are commonly organized before the conference, but organizers might look for additional assistance during opening sessions and other gatherings. Offering your time and service at conferences can easily lead to a multitude of networking opportunities, including with other volunteers.

Identify Leadership Opportunities

When it comes to leadership within the organizational structure of a conference, often many positions need to be filled. These leadership positions serve as another path to get more involved with the inner workings of an academic conference. Typically, leadership positions involve running for election. The requirements and commitment for holding a leadership role will vary, and it is important to gauge at what point committing to serving in a leadership capacity makes sense for you.

Certain roles may be specifically for graduate students. For example, the Association for Educational Communications and Technology (AECT) has a Graduate Student Assembly (GSA). The GSA has representatives who serve as liaisons between AECT divisions and the GSA by attending division meetings and then reporting to the GSA membership on divisional activities and collaboration opportunities. Mohammad Shams Ud Duha, the 2023 GSA president, shared that GSA membership and leadership will help you to do the following:

- connect with fellow graduate students who are facing similar challenges
- collaborate with other students on research projects and instructional design projects
- gain useful leadership skills and expand your network as you get to work with professionals

For some individuals, it may be good timing to seek a leadership role as they are completing their doctoral program and planning to go on the job market. To gauge timing for this and other leadership opportunities, it may be helpful to check the conference website for any guidelines, requirements, and commitment lengths. You may even wish to seek input and advance from those who have previously held leadership positions.

Mohammad Shams Ud Duha (front) with (from left to right): Okan Arslan, Annetta Dolowitz, Waneta Hebert, Mary Gutierrez at the GSA table for the AECT reception

Special Interest Group Leadership Opportunities

Special Interest Groups (SIGs), or divisions, offer a variety of service and leadership opportunities. SIG service is a great way to demonstrate leadership, get to know SIG members/leaders, and network with senior faculty. Patrick Lowenthal found that serving in SIG-level leadership roles was particularly helpful because it helped to structure his networking efforts: "It forced me to meet people I might not otherwise, and had structured events where I had a purpose when I was at a social place."

Specific SIG positions will vary from conference to conference. At some conferences, a SIG co-chair or president position is considered an entry level position, whereas other conferences may offer more positions aside from SIG chair (e.g., board representative, communications officer, member-at-large, and awards committee member). Typically, members provide service to a SIG before running for a chair position. Some SIG service positions are elected while others are selected, so it is important to check with the SIG website or leadership to learn more about the process. Rick West remembered that while serving as a communications officer was a relatively low time commitment, it allowed him to get to know SIG membership and for the SIG membership to get to know him.

"Oh, YOU'RE Rick West!" – Rick West

When I was a graduate student, I knew I wanted to be involved and have the opportunity to network with people, especially other division leaders, so I volunteered to be the communications officer for the Distance Learning division of AECT. Also, this felt like a job I could do fairly easily, as it involved sending emails and maintaining a division blog. What I didn't expect was how effectively this helped me network with others in the division. At one AECT conference, I introduced myself to someone else, and they immediately replied, "Oh, YOU'RE Rick West!" I had never met her before, but she knew me—or rather my name—because of all the emails I sent out for the division.

Charles Graham (left) talking with Rick West (right)

A SIG co-chair position might have more time-intensive responsibilities, such as:

- communicating with SIG members about deadlines for submission,
- helping to manage the review process for submissions to the SIG,
- holding a SIG business meeting at the conference, including overseeing voting for new SIG officers as needed,
- organizing relevant SIG online events throughout the year and in-person events during the conference,
- attending leadership meetings while at the conference, and
- reporting out about SIG activities to leadership.

Doctoral students can and do successfully serve in SIG positions, so it is something to consider, especially if there is a SIG closely aligned with their research agenda.

After gaining experience at the SIG level, there may be additional opportunities to move into leadership at the conference or whole organization level. As you attend conferences, becoming aware of their organizational structure is helpful so that you can plan for future leadership opportunities.

Participate

For some, participating in networking activities at a conference can come naturally. For others, networking at conferences can be challenging or even anxiety inducing. If that is the case for you, know that you are not alone. In fact, some of the people we reached out to for this chapter who we viewed as model networkers, expressed their personal uncertainties about their abilities to network. Conference networking is a skill that you will develop throughout your career so long as you are willing to simply *participate*.

Attend Social Events

Almost all academic conferences will offer social events, from coffee breaks to parties, that are designed for networking—do not miss them! Curtis Bonk explained that social events are where "you can meet people in a fun and informal way."

Be open to new experiences. Relax, be yourself, have fun, and participate. You never know what will come as a result. Patrick Lowenthal also suggested, "Sign up for the tours or things where you find yourself with strangers at the conference." Some of these social events require a fee but it can be well worth the cost just to network in a relaxed, fun setting. Lowenthal also learned to "tour the city with friends

and colleagues." He wrote, "At my first AERA, my colleague wanted to go see Columbia and a Cubs game; I didn't know you could NOT attend a day but he had someone I didn't know join us. It was great."

Dressed for Success – Mary Rice

My first year on the job market I sent out over 30 applications and did almost 20 phone interviews and 4 onsite visits but didn't end up with a job. So, I finished my dissertation and graduated feeling very bad. There was a conference during the summer that I had gone to for several years, but as I said, it was silly to spend time and money on academic conferences when I might not even end up being an academic. My friend, Stefinee Pinnegar, told me to just come and hang out with her. At the conference, there was a dinner on the second night with some games and mingling, and we were free to dress up silly. Stefinee and I went in our orange feather boas and silly sunglasses and laughed and chatted with people. At some point, I ended up seated next to a very friendly scholar who asked me lots of questions, and we had a great conversation. I remembered that she had been on an interview committee for a job I had done a teleconference interview for and then I did not advance. The next day, the scholar from the dinner made a point to get into my conversation group. After the presentation, she told me that she thought I seemed familiar and had done some digging and remembered that I had indeed applied. She told me there would be another position this year due to retirement and encouraged me to apply. I watched for the announcement, and I applied. I got that job!

Mary Rice (left) with her friend Stefinee Pinnegar (right)

Introduce Yourself

As a graduate student on the job market, the simplest and best networking advice Jered Borup received was to, "just shake hands and introduce yourself." Tonia Dousay explained:

> Every event is an opportunity to meet someone new. Worst case, you spend a few minutes and learn an interesting detail. Best case, you make a new friend/mentor or find an opportunity. Either way, you only win if you take a chance and introduce yourself.

Introducing yourself can be especially intimidating if you are not a native English speaker. Larisa Olesova encouraged those whose native language is not English to "practice small talk in English at home and then talk to anyone at the conference just to practice good professional English."

Larisa Olesova (center) with friends Chen XJ (left) and Ayesha Sadaf (right) at AECT 2022

Be a Conference Angel – John Curry

I'd say one of the things I always try to do is talk to people sitting alone. There are a lot of folks who are just as lost, lonely, or nervous as you are. Somebody has to make the first move. Some of the folks I look forward most to seeing at conferences are people I met in random places. For example, I met Jin (Joy) Mao on the airport shuttle on our way to the conference hotel about 15 years ago or so. Now we have served in division leadership together, and we are currently editing a special issue of *TechTrends* together. I look for folks waiting by an elevator or who are trying to find rooms (you can tell who is there for the conference by the tag, right?) and introduce myself and ask where they are going or what their favorite session they've been to has been. Granted, I'm in a position now within my organization that many know who I am, but I tried to do it even before then. Most folks wish they had someone to talk to. Most folks wish they had someone to eat with. Most folks don't want to experience the conference alone. So go be someone else's conference angel!

John Curry (center front left) with Idaho State University faculty and graduate students at AECT

Be Curious and Ask Questions

As you meet new people, show genuine interest in who they are and what they do. Tonia Dousay shared:

Don't be afraid to ask questions, and be genuinely interested in the answers. You never know when you might be the only person familiar with a topic simply because of a chance encounter. And you'll know who to contact when you have more questions or can recommend an expert on the topic.

Cecil Short experienced this first-hand as a graduate student, when he met Tonia Dousay at a poster presentation on technological pedagogical and content knowledge (TPACK). Not only did Cecil learn about a new framework, he developed a friendship that led to conference planning collaborations.

When you attend sessions, stay present and focused on what is being shared. At the end of the presentation, you will likely have an opportunity to ask questions. Show your curiosity and interest by asking a question—it's a great networking and learning opportunity. Charles Graham shared, "Being curious about others' presentations and ideas has helped me to ask meaningful questions that sometimes lead to further conversations and interactions. It is important to always approach asking questions respectfully and with sincere intent to understand."

Linger Longer

Rather than leaving immediately after sessions, linger longer to talk with the presenter. Often a "thank you" can turn into a memorable hallway conversation. Like Curtis Bonk and Thomas Reeves (see the callout box below), some of the most famous scholars in our field are also the most generous with their time and have a soft spot for those new to the field, so attend their sessions and do not be intimidated to talk with them after.

Networking with the Stars – Thomas Reeves and Curtis Bonk

When I went to my first AECT in 1975, Professor Don Ely encouraged me to stay after sessions and speak with the presenters no matter how "famous" they were. I made this a lifetime habit and encouraged my UGA students to do the same. We have a weekly lecture here at The Spires at Berry College, and my wife (also a former Professor) and I always make sure to go up to the lecturer and let them know how much we appreciate them and their presentation. –Thomas Reeves

Go to talks of famous people or those you want to know better. Then at the end of the talk, walk up to the front of the room and ask to get your picture with them. And then send him or her a digital copy of one or more pics after the conference. When you send it, you might include a question or two or three. In the exchange, you have just expanded your network. –Curtis Bonk

Curtis Bonk and Thomas Reeves in Madison, WI, (Aug, 2016)

Photo © 2016 Thomas J. Tobin. Used under Creative Commons 4.0 BY-ND license.

Not only can you linger longer after sessions you attend, you may also choose to have a "hallway conversation" rather than attend a concurrent session. Rob Moore added that if you need to catch up on work, rather than returning to your hotel room, "do work from the lobby as much as possible since that's where people tend to congregate." It's a great place to see friends and make new ones.

Rob Moore (right) with Carlton J. Fong (left) at AERA 2023

Joining the Hallway Conversation – Elizabeth Langran

Don't underestimate the value of "hallway conversations." At a conference, you certainly want to take advantage of the concurrent sessions, but some of my best conferences where I learned the most and set the groundwork for future collaborations were ones where I spent time hanging out in the hallway areas and getting into conversations with other conference attendees.

Pictured here left to right are Gina Solano, Elizabeth Langran, Annie Evans, and Curby Alexander chatting about Geospatial Technologies over boxed lunches at SITE 2023. Photo by Gerald Knezek.

Find Your Academic Home

Florence Martin shared, "I would recommend new attendees get involved in division or SIG meetings and activities, as that will help them connect with those who have similar interests." SIGs often have open membership meetings that are a good place to network, but don't stop there. Some of the best SIG networking opportunities are less formal than membership meetings and can take the form of dinners, SIG-specific presentations, or SIG social events such as casual game nights, sponsored dinners, or even yoga/running meet-ups. Following SIGs on social media, or joining their other communication platforms, can be a great way to learn about these opportunities and become familiar with people's names before the conference. During the conference, SIG members may also post invitations to impromptu meet-ups.

AECT's Division of Distance Learning from left to right: Florence Martin, Michelle Estes, Tonia Dousay, Megan Murtaugh, Larisa Olesova, and Ayesha Sadaf

As previously mentioned, some conferences may have a SIG specifically for graduate students. Even if you do not seek leadership opportunities in these SIGs, they are still a great place to start. You will meet other graduate students as well as executive members of the conference. Members of the graduate student SIG are the future leaders of the conference organization, so establishing relationships with them is great for your longevity and involvement in the conference. We encourage graduate students to not only get involved with a graduate student SIG but also a SIG based on their research or practice interests.

Never Eat Alone

Meals and drinks are great networking opportunities. Rob Moore advised conference goers to "never eat alone." Rick West elaborated, "try to find groups to eat with, even if it's peers as a student. Your student peers will be leaders in the field someday." It is natural to gravitate toward eating with people you know, and that is good. What is better is to invite others you do not know to join you as well. West added an example from a recent conference where he wanted to get to better know someone he interacted with on social media, so he asked if the person wanted to catch lunch. Pretty soon, the group expanded, and he was able to meet several new people.

Get a Little Help from Your Friends (and Mentors)

All of the tips above are much easier with help from others. Encourage friends and colleagues to attend with you. Conferences are better when you attend with someone you already know. If you are a graduate student, ask to shadow your mentor or other faculty. Their inside knowledge can be extremely helpful by showing you the lay of the land and introducing you to others. Curtis Bonk suggested, "Go to the conference socials (perhaps with your professor(s) or senior people) and watch them get excited to see old friends and wait to be introduced." As John Curry, remembered:

> With David Merrill as my chair, when I was with him, EVERYONE wanted to talk to him. But whenever someone would come up and start talking to him, he would always say, "Do you know John?" And he'd introduce me. I got to know so many people that way. Now I do the same with my students.

Graduate students and early career faculty and professionals can receive mentoring but they can also be a mentor. Elizabeth Langran explained, "You can be a mentor too! Even if you are early in your career, there's probably someone at the conference who is even newer than you."

Navigating the Network – Leanna Archambault

For many of us in the learning/instructional design and technology space, it can be challenging to find our place at a conference, especially when it may seem like everyone already knows everyone else. Early on, I certainly struggled to find my niche. I tried attending newcomer sessions and talking to editors at "Meet the Editors" sessions, but on my own, it was difficult to make connections. As a result, very little networking happened until I met a senior scholar at a small conference who introduced me to her doctoral student, Kathryn Kennedy. As it turned out, not only was Kathryn interested in the same research topics, but also was at a similar stage in her graduate work. It was connecting with this "friend of a friend" concept that proved invaluable. We went on to become close colleagues and friends, collaborating on a number of projects. We also began attending conferences together, which proved extremely helpful. As it turns out, for me, the "buddy system" was extremely useful when it came to networking. Kathryn was able to introduce me to her colleagues, and together we felt more comfortable meeting new people. We soon felt ready to take on a leadership role, starting out as SIG Co-Chairs. This role provided additional structure to the conference, with required leadership meetings where we were able to connect with more senior faculty.

Over time, I met many colleagues this way –through leadership gatherings as well as being introduced to friends of friends. At mid-career, I felt ready to take on a larger leadership role at the council level, which provided the opportunity to engage in planning meetings and have additional input on the conference itself. However, I still looked for those close trusted colleagues who were interested in serving together as a support system. For me, having at least one "wing person" has been a key strategy to making the most out of the networking opportunities that conferences can provide. Now, as a more senior scholar myself, I make it a point to introduce others, especially if they are doctoral students, and include them in social gatherings. My hope is that it helps others connect, expands their network, and makes conferencing a little less daunting—just as it did for me many years ago.

Leanna Archambault (left) and Kathryn Kennedy (right)

Pursue

Congratulations! You have made it through the conference! However, you are not done with your conference networking quite yet. Even after the conference, you can enrich the time you spent networking if you pursue lasting connections with those you met.

Reach Out to New Colleagues

It is important that you maintain your connections to the people you met at the conference, especially if you plan to attend the conference again or if you met anyone you might want to work with in the future. Go through the records of handouts, business cards, and contact information you collected at the conference. Send emails to anyone who might provide opportunities for collaboration in the future. As Mary Rice noted, "I take people seriously when they say they are interested in doing something together, and I remember them." If you have not already, connect with the people you met by following them on social media. Follow up with others about potential collaboration opportunities discussed during conference sessions, in the hallways, or over dinner. In fact, while you are at the conference or flying home, you can draft emails that you schedule to go out to your new colleagues a week later when memories of the conference begin to fade. If you exchanged contact information with those who attended your session, send updates about your work when it becomes publicly available.

Organize Conference Notes

During a conference, you encounter a lot of information. Post-conference it is important to create a system for tracking any handouts, presentations, or notes from the sessions you attended. Possible systems include keeping a well-organized file folder in Google Drive or on a Flash Drive. Cecil Short uses Google Drive and has a parent folder for each organization's conference that he has attended. Within that folder are folders labeled for certain years of the conference, e.g., "AECT 2021," "AECT 2022," or "AECT 2023." Within the annually named folders are places for proposals, presentations, and notes (Figure 2). Other knowledge management systems may allow you to tag session notes and presentations according to authors or topics.
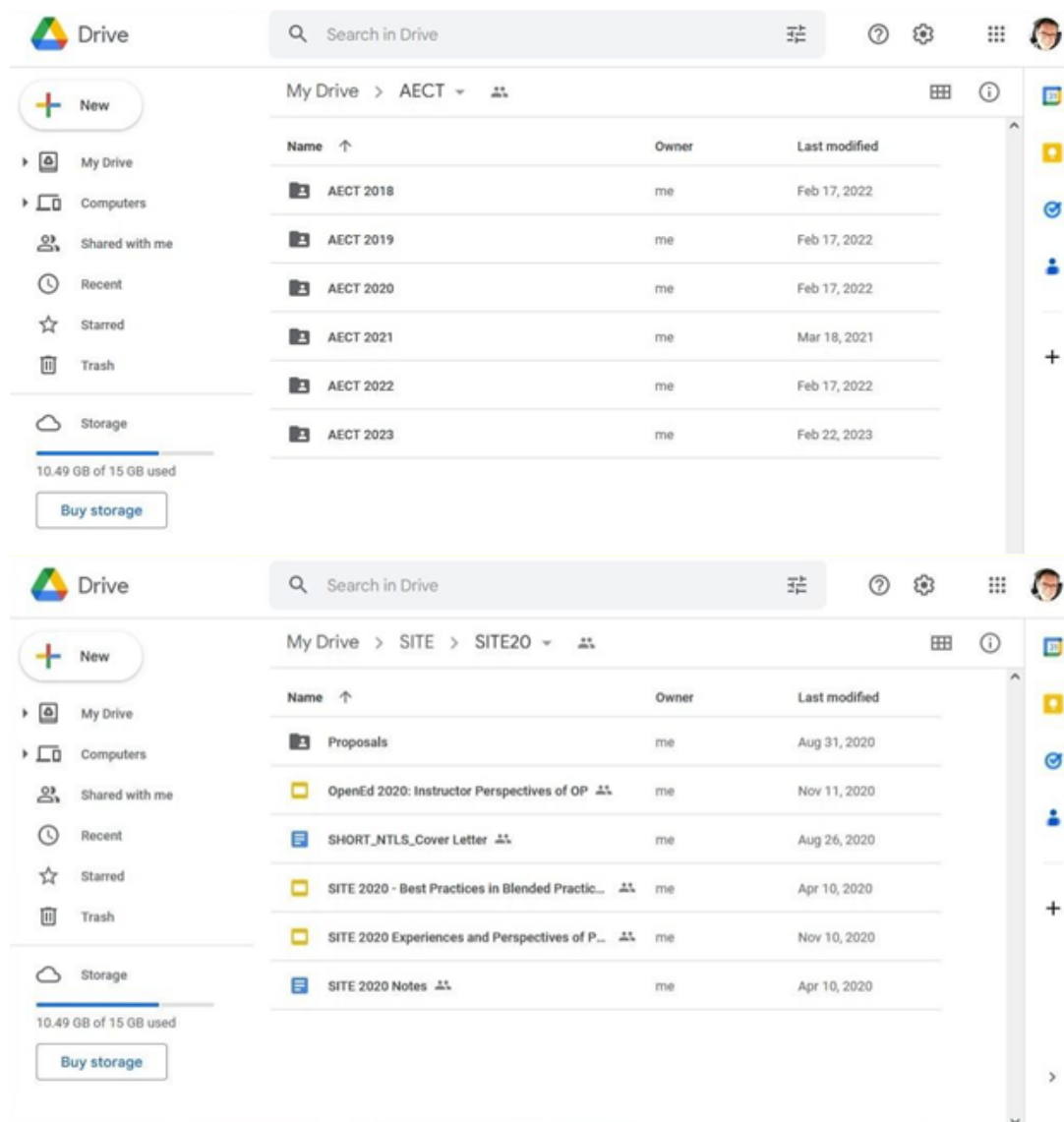
Figure 2. Examples of Conference File Organization

Conclusion

Conferences are a part of academic life that offer unique networking opportunities. However, at times, networking can feel a bit overwhelming if it is your first—or even 21st—conference. Networking is easier with a friend and/or mentor by your side. We also hope that the 4Ps can help you to prepare, provide, participate, and pursue networking opportunities not only at the conference but throughout the year. The ideas in this chapter can help you to think big about conference networking, but we encourage you to start small. Set achievable networking goals, and celebrate your accomplishments.

Author's Note

This chapter focused on attending in-person conferences. While many of the tips and strategies for networking at in-person conferences would apply to online conferences, if you are looking for tip and strategies specific for online conferences, we recommend reading Thomas J. Tobin's article in the Chronicle of Higher Education (14 Jul. 2020), "How to Make the Most of a Virtual Conference."

URL: https://www.chronicle.com/article/how-to-make-the-most-of-a-virtual-conference

Jered Borup

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Jered Borup is the professor-in-charge of George Mason University's Blended and Online Learning in Schools Master's and Certificate programs that are devoted to improving teacher practices in online and blended learning environments. Previous to earning his Ph.D. at Brigham Young University, Jered taught history at a junior high school for six years. He has also taught online and blended courses since 2008. His current research interests include developing online learning communities and identifying support systems that adolescent learners require to be successful in online environments. A full list of his publications can be found at https://sites.google.com/site/jeredborup/

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PIDT, the Important Unconference for Academics

Richard E. West

Graduate Students   conferences

PIDT is an annual meeting that has become a favorite for many faculty to discuss issues related to curriculum, doctoral student advising and teaching, research, professional service, and emerging theories and technologies. By designing a small conference, focused on networking, discussion, informality, and professional growth, PIDT has a tradition of providing key opportunities for professional development. This chapter explains what PIDT is, and how to participate and attend a future conference.

PIDT is an annual meeting that has become a favorite for many faculty to discuss issues related to curriculum, doctoral student advising and teaching, research, professional service, and emerging theories and technologies. By design a small conference, focused on networking, discussion, informality, and professional growth, but still a conference from which a large number of initiatives and defining publications have emerged. The following is a brief history of this unique and important conference in our field.

PIDT History

In 2004, Wineburg poetically lamented the state of presentations at the American Educational Research Association (AERA) conference. He described his first AERA conference in 1985, and his excitement to attend a session where four "luminaries" in his field would be presenting. Enthusiastically, he squeezed into the packed room, only to hear one esteemed professor read her notes verbatim. The second speaker did have visuals, but after "firing slides like an Uzi fires rounds," Wineburg realized few were actually paying attention or learning from the presentation. He asked, "Must it be this way?" (p. 13).

That same year, 1985, a group of instructional systems technology professors quietly answered, "No!" and formed a unique, new conference, which was really more of a professional meeting than a conference. This "unconference" emphasized everything traditional conferences were not, including a priority on discussion, interaction, networking, mentoring, and action. "The main focus was primarily social and professional interaction on an individual/small group basis. The remote, rural settings provided opportunities for much more conversation and interaction than would be available at larger, more structured conferences," Mike Moore of Virginia Tech said. A focus on balancing structure with informal conversations is a tradition that lives on in the PIDT meetings, which have been held annually except for 1997. The group originally called themselves Professors of Instructional Systems Technology, which reflected the direction of the field at the time, but which formed an awkward acronym that only persisted for a few years before becoming PIDT. Sleeping in cabins that for the first few years did not have indoor plumbing or heating, and meeting at a rustic retreat at Shawnee Bluffs in Indiana, on the banks of Lake Monroe, the original group (led by Dr. Thomas Schwen of Indiana University) met to discuss curriculum, research, and the emerging directions of the field.

"We were a new enough field that maybe people wanted to share information," Rhonda Robinson, of Northern Illinois, said. Robinson added that PIDT especially provided a way for female professors, who were fewer at the time, to associate and mentor each other.

The meeting was so successful that they continued meeting annually in Indiana. Eventually, the conference was moved to a rotation system, typically held at either Estes Park, Colorado, or Smith Mountain Lake, Virginia, while occasionally being held at other locations. Wherever the meeting is held, the emphasis has always been on locations where recreation merges with business, allowing participants to begin conversations in classrooms and continue them on a hike or in a canoe.

After a few years, the group decided to expand and allow faculty attendees to bring one advanced doctoral student each, as a way to introduce the students to additional faculty mentors. "Many of us were graduating and did not know how to get into the professoriate. I had three courses and no ideas what to do!" Sharon Smaldino of Northern Illinois said. "We were finding that a lot of the newbies were getting lost. They weren't understanding the big picture. . . . We tried to make a way to ensure their success. That's something unique about this meeting. It's very nurturing." Eventually attending PIDT became an honor for many graduate students lucky enough to be chosen to attend with their adviser.

Professional Development

Despite an emphasis on informality and recreation, PIDT has a tradition of providing key opportunities for professional development where participants can explore new technologies, develop new theories and ideas, receive feedback on new initiatives, and collaborate on new publishing opportunities. Many PIDT attendees remember learning about emerging technologies for the first time at PIDT, such as Twitter, Second Life, Nvivo, and even the World Wide Web when it was still a radically new innovation. "I get to listen to what the doc students are talking about these days and check what I'm teaching," Robert Branch, of the University of Georgia, said. "I first heard about Twitter here, and OER (Open Educational Resources). Things that I could not 'not know.'"

In addition to strands about new technologies, PIDT typically has a curriculum strand, where participants bring syllabi and teaching materials to share. In years past this has included sessions on classes common to most departments (such as a pre-service educational technology course) to new courses being developed (such as a course on ethics and instructional technology) to other, larger proposed changes within academic departments. "The established faculty have a forum if they need it. When we moved to LDT (Learning, Design, and Technology as a new name for their academic program), it was here we tried it out," Branch said.

Other topics commonly discussed at PIDT include the following:

- Strategies for mentoring and advising graduate students
- "Big" ideas that are being developed for publication but which need a venue for preliminary exploration
- Writing projects needing collaboration
- Advice for students who are job hunting or for new faculty seeking tenure. These sessions have often been very practical, with students bringing vitas/cover letters for critique or senior faculty providing mock job interviews
- Sessions more relevant to the needs of mid-career or late-career faculty

Typically, only about half of these sessions are scheduled ahead of time, with the rest emerging at the conference as attendees discuss topics of interest to all of them. However, most participants feel the greatest value of PIDT is the professional development that occurs in between sessions. "I learned a lot from watching the senior people in the field," Smaldino remembered. "I think . . . people like to get together to have these informal conversations that you can't have inside your program [where you can] sit down and talk about how do you do I.T.?"

These opportunities for networking in a relaxed atmosphere also are beneficial for graduate students. "It's a lot of fun. We get so serious as professors and forget to have fun. It's important for students," Robinson said, before adding that "A theory in parenting is that it's important for kids to see parents play" and doctoral students get the same benefit from networking with professors in a relaxed, recreational event.

Where Publications Are Born

Traditionally, PIDT has been a place where collaborators could meet and discuss ideas for publications. Perhaps most well known was when David Jonassen was selected to edit the first edition of the *Handbook of Educational Communications Technology* and used PIDT to brainstorm the list of chapters/topics and to recruit many of the authors. Numerous other articles and book chapters have similarly emerged from PIDT collaborations, including at least one edition of the AECT definitions and terminology book, with many of the definitions hotly discussed at PIDT sessions.

Future Conferences

The PIDT conference is typically hosted in the East, then the West, and sometimes somewhere in the middle. Where it's hosted is usually planned a year away, based on which universities and departments are interested in hosting. There is no formal organization or leadership, but the departments at Virginia Tech and Brigham Young University have cared for the website and Facebook group over the last decade, and hosted the majority of the conferences. To learn more about upcoming PIDT conferences, visit the [Facebook page](#) or the [official website](#).

> ### Application Exercise
>
> - Look at the PIDT website and/or Facebook page. Find out more information about this "unconference," such as where it will be held next and who usually attends.

References

Wineburg, S. (2004). Must it be this way? Ten rules for keeping your audience awake during conferences. *Educational Researcher, 33*(4), 13–14.

| | Please complete this short survey to provide feedback on this chapter: http://bit.ly/PIDTConference |

Where Should Educational Technologists Publish Their Research?

Updated Results From a Survey of Researchers and Professionals

Matthew L. Wilson & Albert D. Ritzhaupt

publishing   journals

Ritzhaupt et al. (2012) asked, "Where should educational technologists publish their research?" This question remains relevant for today's researchers. Most researchers argue that high caliber, peer-reviewed works should be the benchmark for quality. But which journals are high caliber? In this chapter, we share results of a survey of professionals and researchers, identifying which journals in the field are most visible and considered prestigious.

Over a decade ago, Ritzhaupt et al. (2012) asked, "Where should educational technologists publish their research?" This question remains relevant for today's researchers. However, what are the factors for answering that question? Most researchers argue that high caliber, peer-reviewed works should be the benchmark for quality (e.g., Schimanski & Alperin, 2018), but they also suggest that various metrics, like impact factor alone, can be problematic in making a judgement by using the metric alone (see McKiernan et al., 2019 for more details). With the increasing number of publication venues (e.g., some lists of venues include more than 100 journals) available to educational technology researchers (Ritzhaupt, n. d.), we need guidance beyond acceptance rates and impact factors to assist us in choosing where to share our research (West & Rich, 2012).

Once research is complete and the manuscript is written, where does it go? How do you find the best publication outlet for your work? And why is this important? Understanding the right outlet for a manuscript can challenge even a seasoned author. As such, the task of picking a venue as a novice researcher is even more daunting, which can lead to questionable choices in selecting a journal for manuscript submission. Frandsen (2019) reviewed the literature on the causes of poor journal selection and highlighted motivational factors and the lack of awareness as the cause for poor selection. Kurt (2018) found that the pressure to publish, general unawareness of quality publication channels, and/or fears of social misperception or academic inadequacy, lead novice researchers to publish in predatory journals. These types journals "prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices" (Grudniewicz et al., 2019, p. 211). As such, Al-Khatib (2016) suggested that publication in poor or predatory journals can lead to "negative scars" on career advancement (e.g., tenure and promotion), which could result in novice researchers facing long-term consequences for publishing in a predatory journal.

Purpose of this Chapter

Understanding the value of publication outlets, particularly peer-reviewed journals, can play a critical role in the careers of new scholars. As explained by Ritzhaupt et al. (2012) in their earlier examination of these factors, the academic career path requires justification of publication choices throughout. Yet, as noted earlier, there are arguably over 100 journals in the field of educational technology (Ritzhaupt, n. d.), including journals on topics from educational pedagogy to neuroscience. This can make selecting the "right" journal challenging at best. Novice scholars need to clearly understand where to publish, and faculty who are seeking promotion and tenure need data to explain why their work is valuable to their discipline. The earlier study by Ritzhaupt et al. (2012) filled this void but is now dated. To update their work, we answer the following questions in this chapter:

- Why do educational technologists choose particular publication venues?
- How prestigious and visible are different peer-reviewed educational technology journals?

Research Methods

Instrumentation

As with Ritzhaupt et al. (2012), we designed a survey to collect background information from respondents and asked them their beliefs about the relative importance of different factors for selecting a publication venue, and their perceptions of the prestige and visibility of journals in the field. Respondent demographic questions included gender, years in the field, academic rank, service in the field of educational technology, ethnicity, highest degree earned, professional affiliations, and country of residence.

Decision-making factors influencing publication choices were rated using a five-point Likert scale ranging from *Unimportant* to *Maximal Importance*. The responses were coded for analysis from zero (0) to four (4) because it was decided that factors rated as "unimportant" to the respondent should not attribute any point weight to the mean score. We included 11 decision factors, to be consistent with Ritzhaupt et al. (2012).

Perceived prestige data was collected both qualitatively and quantitatively. The qualitative data was collected via text entry. To collect this data, five questions asked the participant to enter, from their perspective, the ranking of educational technology journals at five levels, starting with the "top" journal in the field down to the "fifth highest ranked" journal. It is important to note that answers were based on the respondent's personal knowledge of journals in the field and the perception of their value and prestige. In other words, they may not have known about other high-quality journals, and thus our study is about perceived visibility/prestige.

We quantitatively measured perceived prestige by first curating a list of journals in the field consistent with the list in Ritzhaupt et al. (2012). We then asked respondents to score each journal by using a six-point scale from *Lacks Prestige* to *Exceptionally Prestigious*, as well as a low-end option of Irrelevant/Unknown to Respondent (we coded this option as zero). The full seven-point scale was analyzed to assess perceived prestige of each journal, while the converse percentage of "irrelevant/unknown" rating was calculated to indicate a journal's visibility. The journal prestige portion of the instrument had a Cronbach's α = 0.974.

Participant Recruitment and Survey Administration

Participants were recruited via social media groups and listservs for members of the Association for Educational Communications and Technology (AECT) and the American Educational Research Association's (AERA) Special Interest Groups (SIG) on Instructional Technology and TACTL (Teaching as an Agent of Change in Teaching and Learning). The survey was open to response from December 16, 2022, to the end of January 18, 2023. A total number of 101 participants completed the survey. Survey instances with missing responses to the questions on journal selection criteria or journal prestige were deleted, removing 29 (n = 29) participants and leaving a total of 72 completed responses for analysis.

Table 1 summarizes the role of the respondents, with the majority self-identifying as some type of professor (i.e., assistant, associate or full professor), which also accounts for the majority holding a doctorate degree (Table 2), or being a graduate student. For the participants, the mean length of activity in the field of educational technology was 15.94 years with a median length of 12.5 years. Table 3 and the histogram (Figure 1) provide a full descriptive summary.

Role	Count	Percent
Full Professor	12	16.67
Associate Professor	11	15.26
Assistant Professor	16	22.22
Lecturer	4	5.56
Non-Academic Role	7	9.72
Graduate Student	12	16.67
Other	10	13.89
Total	72	100.00

Table1. Academic Position

Degree	Count	Percent
Doctorate	52	72.22
Masters	20	27.78
Total	72	100.00

Table 2. Highest Earned Degree

Statistic	Years in Field
Valid N	72
Mode	4.00
Median	12.50
Mean	15.90
Std. Deviation	11.94
Minimum	1.00

Maximum	50.00

Table 3. Years in Educational Technology
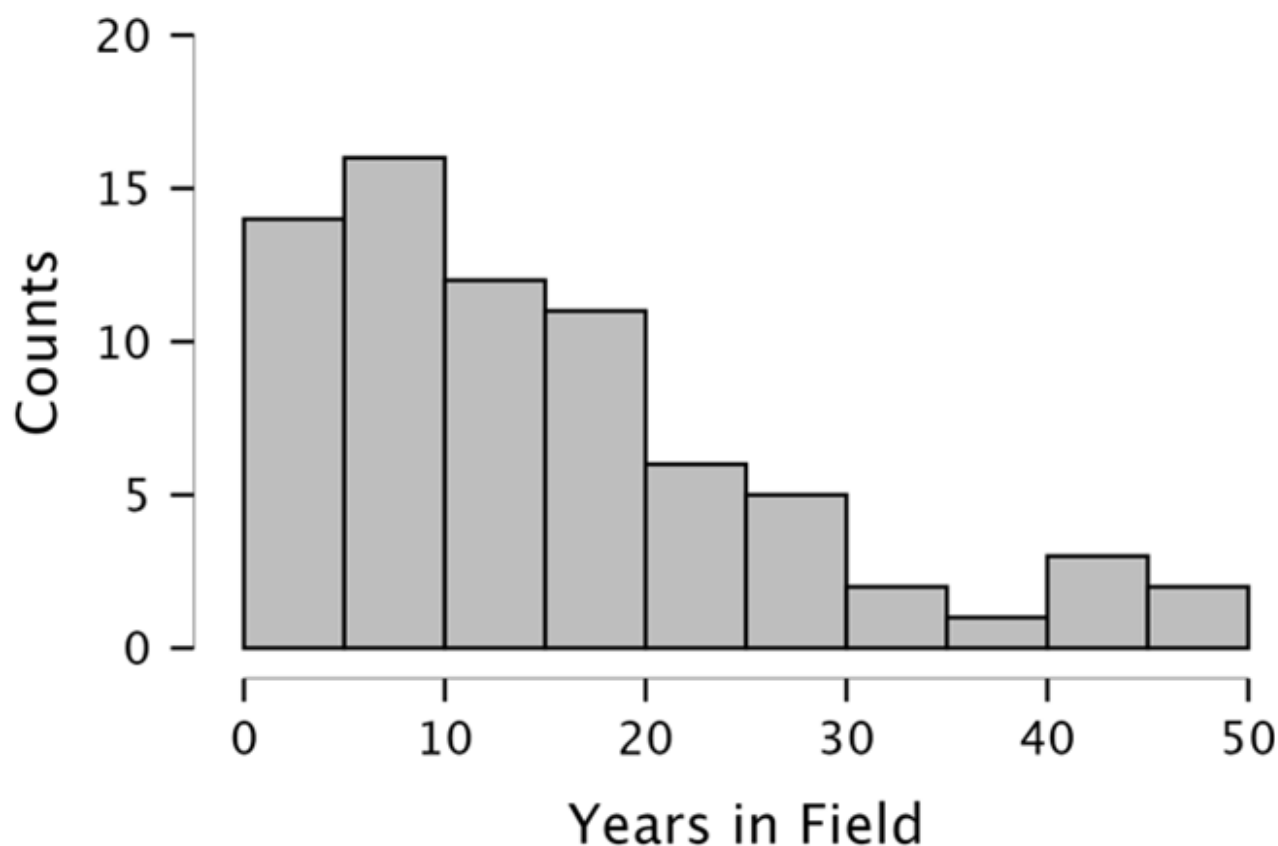
Figure 1. Years in Educational Technology

Data Analysis

From the original pool of seventy-two responses, the qualitative data on academic prestige was analyzed. Nearly sixty (n = 59) journals were identified as ranking in the "Top 5" journals in terms of "academic prestige" by the survey participants. The remaining data sources for the factors leading to publication venue selection, perceived prestige, and visibility were analyzed using basic descriptive statistics (e.g., M, SD, or %).

Results

The two questions we addressed through this work were:

1. Why do educational technologists choose particular publication venues?
2. How prestigious and visible are different peer-reviewed educational technology journals?

In the following sections, we first summarize and analyze the specific criteria academics use to support publication decisions. Then, we look at the perceived prestige and comparative visibility, as well as the major criteria used to assess journals.

Decision Factors

First, we wanted to understand which factors influenced practicing educational technology researchers' decisions of where to publish. We included 11 potential factors that were rated using a five-point scale from zero (*Unimportant*) to

four (*Maximal Importance*). Overall, these researchers felt it was most important to find a good "fit" with the manuscript, followed by journal ranking and research accessibility (see Table 4).

Decision Factor	Current			Ritzhaupt et al. (2012)		Shift in Rank
	Mean	SD	Mode	Mean	SD	
Manuscript Fit	3.35	0.74	Maximal	4.66	0.62	---
Journal Rank	2.67	0.98	Moderate	3.59	1.26	↑2
Impact Factor	2.58	1.05	Moderate	3.46	1.26	↑2
Accessibility	2.54	1.07	Considerable	3.62	1.06	↓1
Journal Indexing	2.42	1.14	Moderate	3.54	1.14	---
Acceptance Rate	2.29	0.90	Moderate	3.76	1.06	↓4
Publishing Association	2.13	0.98	Moderate	3.25	1.21	---
Frequency of Publication	1.97	0.93	Minimal	2.71	1.11	↑2
Publisher	1.96	0.94	Minimal	2.48	1.19	↑2
Editorial Review Board	1.83	0.87	Minimal	2.85	1.16	↓1
Editors	1.79	0.86	Minimal	2.86	1.09	↓3

Table 4. Importance of Factors in Selecting Publication Venue

Prestige

The perceived prestige of publications in the domain of educational technology was evaluated using a pair of metrics. First, each participant was asked to list the Top 5 journals in the field from their perspective. Journals listed by name were first counted across all five ranks to get a "mentions" count. The journals listed then had each of their mentions weighted by rank with the "top" journal receiving a weight of five (5), the second highest ranked a four (4), and so on down to a weight of one. Table 5 presents the results ordered by the weighted score.

Journal	Mentions	Weighted
Educational Technology Research and Development (ETRD)	50	199
British Journal of Educational	37	131

Technology (BJET)		
Computers & Education (C&E)	31	131
TechTrends	25	70
The Internet and Higher Education	12	33
Journal of Research on Technology in Education (JRTE)	10	26
Journal of Applied Instructional Design (JAID)	8	24
Distance Education	8	18
Educational Technology & Society	7	18
Online Learning	5	18
Computers in Human Behavior	6	16
Journal of Computing in Higher Education	6	13
Journal of Technology and Teacher Education (JTATE)	3	11
The International Review of Research in Open and Distributed Learning	5	10
International Journal of Educational Technology in Higher Education	4	7

Table 5. Perceived Prestige by Personal Ranking

The second prestige ranking opportunity for the respondents came from the pre-generated list of field specific journals. A journal's prestige score was averaged and then rank ordered using a five-point scale. Table 6 presents the results. If a journal was ranked in the previous 2012 article by Ritzhaupt et al., the 2012 ranking is provided within the table. The differences, then, in the list of journals are due to Table 5 displaying data on what scholars recalled without prompting and how they ordered a pre-determined list of journals (Table 6). However, as can be noted, the top three journals in terms of perceived perception remained the same.

Journal Title	Mean	SD	2012 Ranking
Educational Technology Research and Development (ETRD)	4.50	1.93	1
British Journal of Educational Technology	4.32	1.89	2

(BJET)			
Computers & Education (C&E)	3.97	2.13	3
TechTrends	3.64	1.51	---
The Internet and Higher Education	3.18	2.25	---
Distance Education	3.07	2.00	4
Journal of Computing in Higher Education	3.00	1.88	7
IEEE Transactions on Learning Technologies	2.81	2.11	---
American Journal of Distance Education	2.74	1.65	5
The International Review of Research in Open and Distributed Learning	2.74	2.11	---
Computers in Human Behavior	2.68	2.28	---
Journal of Computer Assisted Learning	2.65	1.97	---
Journal of Research on Technology in Education (JRTE)	2.65	2.27	6
Australasian Journal of Educational Technology	2.63	1.73	---
Educational Technology & Society	2.56	1.93	9
International Journal of Educational Technology in Higher Education	2.54	2.23	---
Association of the Advancement of Computing in Education	2.40	1.73	---
International Journal of Computer-Supported	2.36	2.06	---

Collaborative Learning			
Computer Assisted Language Learning	2.28	1.96	---
Journal of Educational Computing Research	2.21	2.03	---

Table 6. Journals by Perceived Prestige

Journal Visibility

Journal visibility was computed by taking the reverse percentage of results when a given journal scored an *irrelevant/unknown* result by a respondent. For example, if a respondent marks *irrelevant/unknown* for the journal *Computers & Education*, that results in a lower overall visibility score. Table 7 shows the results of the upper quartile of the results. Again, for those journals previously ranked in the 2012 article by Ritzhaupt et al., the 2012 ranking is provided within the table for comparison. While some shifting occurred in rank, overall, the most visible journals remained the same. Additional influencers of these ranks are considered later in the discussion.

Journal	Percentage	2012 Ranking
TechTrends	95.83	4
British Journal of Educational Technology (BJET)	90.28	2
Educational Technology Research and Development (ETRD)	88.89	1
Computers & Education	86.11	3
American Journal of Distance Education	81.94	---
Australasian Journal of Educational Technology (AJET)	80.56	6
Distance Education	79.17	8
Journal of Computing in Higher Education	79.17	5
Association of the Advancement of Computing in Education Journal	76.39	9
The Internet and Higher Education	73.61	---
Educational Technology & Society	72.22	---
Computers in Human Behavior	70.83	---

IEEE Transactions on Learning Technologies	70.83	---
International Journal of Technology Enhanced Learning	70.83	---
The International Review of Research in Open and Distributed Learning	70.83	---
Turkish Online Journal of Distance Education	70.83	---

Table 7. Journal Visibility

Impact Factor

Given the importance of impact factor within the results of this study, examining various impact metrics can be of use when determining both the prestige and visibility of a journal. As such, the impact factor, five-year impact factor, and CiteScore ratings were collected for the journals that the research participants identified as most prestigious. We present this list in the order of prestige identified from Table 6 in our study. Each score was hand collected from a journal's website in February 2022. Not all journals presented this information on their site; the missing metrics are listed as *not available (NA)*. Table 8 summarizes the information.

Journal Title	Impact Factor (IF)	Five-Year IF	CiteScore
Educational Technology Research and Development (ETRD)	5.580	5.613	5.4
British Journal of Educational Technology (BJET)	2.588	NA	9.6
Computers & Education (C&E)	13.71	NA	19.8
TechTrends	NA	NA	NA
The Internet and Higher Education	8.591	NA	NA
Distance Education	5.500	5.007	7.2
Journal of Computing in Higher Education	4.045	4.748	NA
IEEE Transactions of Learning Technologies	4.433	NA	7.4
American Journal of Distance Education	NA	NA	4.7

The International Review of Research in Open and Distributed Learning	0.734	NA	NA
Computers in Human Behavior	8.597	NA	14.9
Journal of Computer Assisted Learning	3.761	NA	NA
Journal of Research on Technology in Education (JRTE)	3.281	3.473	4.6
Australasian Journal of Educational Technology	3.067	NA	5.5
Educational Technology and Society	2.633	4.358	NA
International Journal of Educational Technology in Higher Education	7.611	7.826	11.8
Association of the Advancement of Computing in Education Journal	NA	NA	NA
International Journal of Computer-Supported Collaborative Learning	5.611	5.685	NA
Computer Assisted Language Learning	5.964	5.937	8.4
Journal of Educational Computing Research	4.345	3.786	7.2

Table 8. Top Journal Impact Metrics

Discussion

Our first research question was the following: What is the relative importance of factors leading to publication venue selection by educational technologists? Knight and Steinbach (2008) identified "five major considerations" when selecting a journal. The likelihood of manuscript selection (i.e., "fit") should be the primary factor, according to Knight and Steinbach (2008, p. 62). The second most important factor is journal reputation or prestige, which is an amalgamation of age, circulation, acceptance rate, affiliation, citation generation, editorial staff, and impact (Knight & Steinbach, 2008). Relatedly, journal visibility and publication impact is the third factor identified by Knight and Steinbach. The last two considerations have to do with how long publication takes and the potential existence of issues regarding ethics or personal philosophies. Each of these factors were considered both here and within the 2012 article.

The method of data collection we employed does not allow us to definitively state to what degree the decision making factors outlined above played into the decision-making process of the respondents in this study. However, the perceived prestige rankings (see Table 5) that were derived from analyses of the cued-recall questions on personal journal rankings could potentially provide some insights into the value of the journals.

This aligns with what was found both within this research and previous research (Ritzhaupt et al., 2012). As supported by data from both this study and the prior work of Ritzhaupt et al., participants highlighted journal accessibility as a key factor in determining where to seek publication. The issue was highlighted by one participant that stated:

> We are lacking a well-indexed and open-access prestigious journal. I cannot [sic] recommend journals that are not openly accessible across the globe. I realize there is an ethical debate regarding tenure, promotion, workload, and institutional funding. I feel that academics have a responsibility to help change the model and party line so that there are no barriers to publishing in open-access journals.

Accessibility can take multiple forms, but "open" accessibility to keep science free moving appears to be a topic of serious, ongoing consideration across domains (Berkowitz & Delacour, 2020; Matthias et al., 2019; Willinsky, 2018).

In terms of perceived prestige, our results show that the placing of the top journals remain consistent with the work of Ritzhaupt et al. (2012), namely: (a) *Educational Technology Research and Development*, (b) *British Journal of Educational Technology*, and (c) *Computers & Education*. While other academic journals in educational technology shifted in perceived prestige, the placement of these three journals remained consistent. Interestingly, the journal *TechTrends* moved to the first position in perceived visibility according to our survey respondents, which is another official journal from the Association for Educational Communications and Technology (AECT). As mentioned in our methods section, this result may be due to sampling bias from respondents who were mostly recruited from AECT groups and listservs. Still, it indicates a strong visibility for this journal.

While understanding perceived prestige and visibility can help researchers focus on the best venues for publication, focused examination of research networks can also inform publication selection. Journal-level analyses using bibliometric and network analytic methodologies can illustrate the impact a journal has and provide insights when researchers are deciding on outlets for publication (Mering, 2017); as such, these journal-level analyses are highly useful in understanding the nature of the field. Examples of major educational technology journals reviewed in this way include the Australasian Journal of Educational Technology (AJET) (Bond & Buntins, 2018), Computers in Human Behavior (CHB) (Chen et al., 2021; Vošner et al., 2016), Computers & Education (C&E) (Chen et al., 2019), British Journal of Educational Technology (BJET) (Chen et al., 2020), and the Journal of Research on Technology in Education (JRTE) (Wilson, 2022). These educational, technology-focused, bibliometric studies help illustrate the literature of educational technology in a manner that is useful when determining the impact and fit of journals.

Selecting an appropriate journal to publish your research in can be of paramount concern for emerging scholars in the field of educational technology. Journal prestige and visibility can influence tenure as well as promotion decisions along with the overall assessment of a scholar's academic performance and productivity (Fradsen, 2019; Hannafin, 1991; Kurt, 2018). While we do not claim the results from this small snapshot are conclusive in the domain of educational technology, these results are consistent with prior research (Ritzhaupt et al., 2012). This examination of prestige and visibility continues the conversation among scholars in our community on these topics as they pertain to educational technology journals and the use of prestige and visibility as relevant factors in choosing where to place our work. Considerations beyond mere impact factors should be used in judging the merits of a publication outlet (West & Rich, 2012).

Limitations

The results of this research should be considered in light of these limitations. While the survey was widely disseminated via social media, research associations, and networking, over 94% of the respondents indicated membership in the Association of Educational and Communication Technology (AECT). As journals within the study included AECT affiliations (i.e., ETRD and TechTrends), this could have impacted the perceived prestige and visibility of those journals

within the results and the resulting rankings. Similarly, less than 14% of the respondents resided outside the United States. This could have impacted the perception of journals originating outside the U.S. on both scales.

While the survey was intentionally designed to capture information on the visibility, prestige, and importance of selection factors, the results cannot definitively verify the nature of the responses. Clarity in the response process appeared to vary across participants. Many respondents entered associations or "not sure" into the personal rankings of field journals. Alternately, it cannot be confirmed that all participants knew conclusively the journal about which they were responding. For example, the *American Journal of Distance Education* could easily be confused for *Distance Education* and vice versa. As such, the results may have been impacted.

Finally, there is a potential existence of human error in any study. The journals identified for consideration were likely highly rated journals in this field. As such, some journals could have been left out of consideration. However, this is mitigated by the self-report items within the survey.

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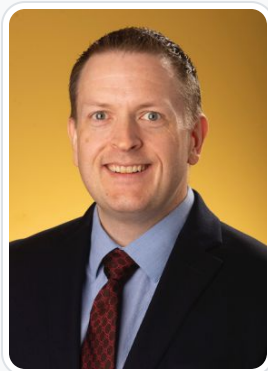
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University of Florida

Dr. Albert D. Ritzhaupt is a Professor of Educational Technology and Computer Science Education, and the Associate Director for Graduate Studies in the School of Teaching and Learning at the University of Florida. Dr. Ritzhaupt formerly served as the Program Coordinator for the Educational Technology program. Dr. Ritzhaupt is an accomplished educational researcher and technologist. An award-winning researcher, Dr. Ritzhaupt has published more than 100 journal articles, book chapters, technical reports, and conference proceedings; and has presented his research at numerous state, national, and international conferences. His primary research areas focus on the design, development, utilization, and evaluation of theory-inspired, technology-enhanced learning environments; teaching practices and instructional strategies in computer and information sciences education; operationalizing and measuring technology integration in education, particularly focusing on the factors that facilitate and hinder technology use in formal educational settings; and the professional competencies of individuals in the field of educational technology. Dr. Ritzhaupt was identified as one of the world's most prolific scholarly authors in the field of educational technology from 2007 to 2017 (Bodily, Leary, & West, 2019). Dr. Ritzhaupt was awarded the 2016 UF Research Foundation Professors distinction, a term-limited professorship awarded to tenured professors who have a distinguished current record of research. In 2019, the Florida Educational Research Association selected Dr. Ritzhaupt as the Educational Researcher of the Year.

Dr. Ritzhaupt has been funded by the Florida Department of Education (FLDOE), National Institutes of Health (NIH), and National Science Foundation (NSF) to support his research endeavors. His publications have appeared in multiple leading venues, including the *Journal of Research on Technology in Education*, *Educational Technology Research and Development*, *Journal of Computing in Higher Education*, *Computers & Education*, *Journal of Educational Computing Research*, and *Computers in Human Behavior*. Dr. Ritzhaupt has been cited and interviewed in a wide range of news media outlets like *Wired*, *National Public Radio*, *Chronicles of Higher Education*, and *Education Week* for his research. Dr. Ritzhaupt is Editor of the *Journal of Research on Technology in Education* (JRTE), the flagship research journal of the International Society for Technology in Education (ISTE); the former Associate Editor of the *Journal of Educational Computing Research*, a social-science indexed Sage publication; a consulting editor for *Educational Technology Research and Development*; a member of the scientific board of *Computers and Human Behavior*; and serves as a reviewer for several other journals. Dr. Ritzhaupt regularly attends and presents at the American Educational Research Association (AERA), ISTE, Florida Educational Research Association (FERA), and the Association for Educational Communications and Technology (AECT). In terms of professional service and leadership, Dr. Ritzhaupt has served as Chair of the Games and Simulations Special Interest Group (SIG) in ISTE, past-Chair of SIG Instructional Technology in AERA, past-President and Director of FERA, and Past-President of the Design and Development Division within AECT. Dr. Ritzhaupt is an active member of

the Educational Technology and Educational Research community both locally and nationally.

Inspired by multiple perspectives, Dr. Ritzhaupt employs a variety of instructional methods in his teaching practice and he consistently receives high scores in his teaching by students. Dr. Ritzhaupt teaches a wide-range of courses for the University of Florida, including on topics like software design and development for educational purposes, multimedia design and development, educational games and simulations, traditional and agile project management, introductory and advanced instructional design, educational research design and applied statistical methods, and advanced seminar courses for doctoral students in the field of Educational Technology. Previously, Dr. Ritzhaupt taught computer science courses for both community colleges and universities in Florida, particularly in the areas of software design and development. Dr. Ritzhaupt is a Level 2 Google Certified Educator (GCE) and a Microsoft Certified Educator (MCE), and commonly uses emerging technologies in his teaching practice. Dr. Ritzhaupt considers his greatest scholarly contribution to be the more than 20 doctoral students he has mentored to completion in the Educational Technology program.

The Real World: Perspectives from IDs in Their Second Career

Mary Armstrong

Instructional Design   Professional Development
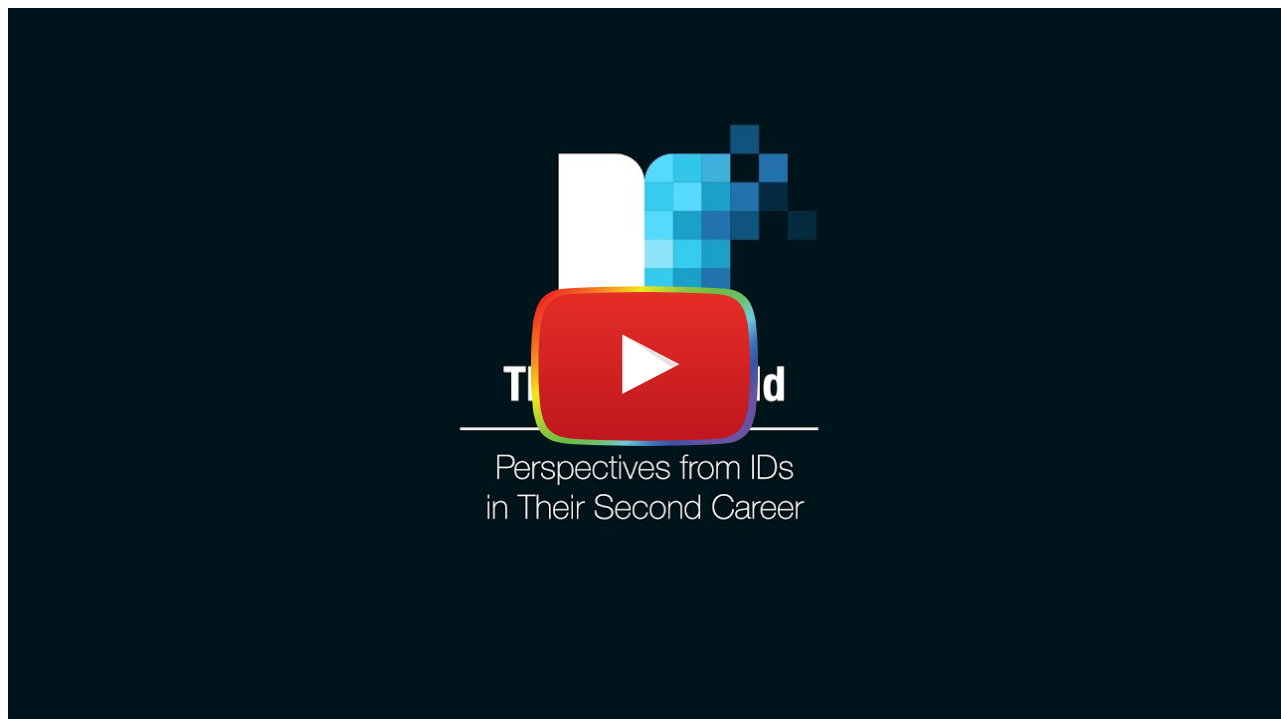
What is the "real world" of instructional design? Where is it? What is it like? The world of the instructional designer takes form in many places, populated by a wide variety of professionals who came to the field via disparate journeys. It appears that no two paths are alike. Students of instructional design may benefit from a glimpse into a future work setting that is likely to include instructional designers (IDs) who have no formal training or credentials in the field but learned on the job and transitioned from a different field.

It is not uncommon for learning and development professionals to take on the duties of an instructional designer and then seek out credentials or education to backfill what they already know. It's certainly not the first job role with a three-word training manual: "Here, do it" — where one is expected to learn the job while on the job (and often on their own). In this chapter I share experiences and lessons learned from a survey of instructional design professionals who

transitioned into this profession from other careers. Learning from their experiences may be helpful as you navigate your own transition.

How I Collected My Survey Findings

For this chapter, I created a 10-question survey that was posted on LinkedIn and other social media platforms and received 26 responses. I then conducted follow-up interviews with 12 survey respondents.

To respect the privacy of the interview subjects, I refer to them by pseudonyms only. Quotes have been edited for brevity and clarity. The survey questions may be accessed [here](#).

Experience Level

The 26 survey respondents possessed different levels of experience, from absolute beginners just moving into their first full-time ID role to practitioners with many years of experience in the field.

Length of ID Career

■ Number of survey respondents

Category	
Less than a year	5
1-3 years	7
4-7 years	5
8-11 years	5
12 years or more	4
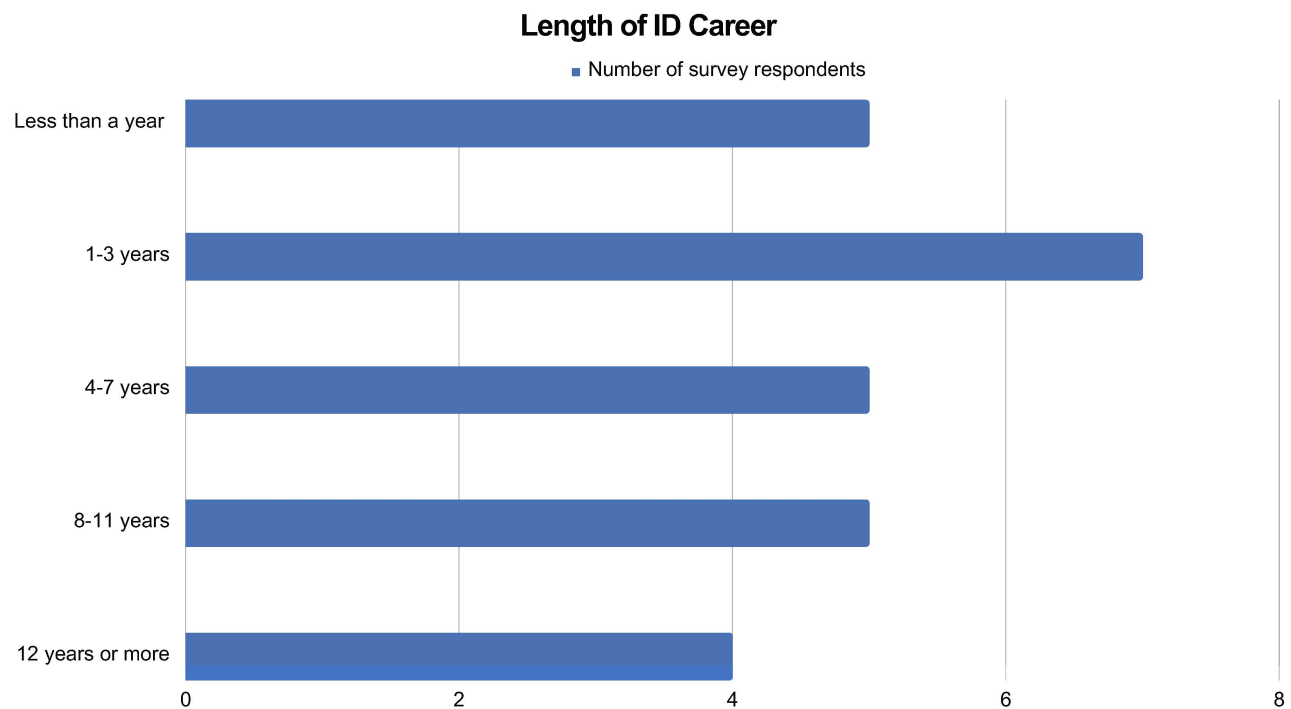
Figure 1. Length of Career Cited by 26 Survey Respondents

Former Careers

The former professions cited in the survey fell into three general categories: education/training, business/tech, and communications. Fourteen of the 26 respondents listed multiple former careers. The responses in the "other" category pointed to the richly varied backgrounds of current IDs.

EDUCATION/ TRAINING	Corporate trainer Education abroad administrator Education department chairperson Educator English teacher ESL teacher Language trainer L&D consultant Middle school science teacher Middle school English teacher Preschool teacher Secondary school teacher Software trainer Special education teacher Trainer Training and development manager	**COMMUNICATIONS**	American Sign Language interpreter Book/magazine editor Corporate librarian Deaf services tech specialist Graphic designer Technical writer Web editor
BUSINESS/ TECH	Business analyst Customer service representative Helpdesk Junior programmer Loss prevention Marketing leadership Recruitment Sales Sales management System admin Tech support Usability engineer	**OTHER**	Active-duty U.S. Air Force Child care center director Engineering Fundraiser Group home manager Medical librarian Opera singer Pharmacy technician Veterinary technician

Figure 2. Previous Careers Listed by 26 Survey Respondents

Industry and Location

The 12 interview subjects reported their current employment in a variety of fields:

1. Self-employed (two subjects owned their own learning and development [L&D] business)
2. Financial institution
3. Cosmetics manufacturer
4. Cybersecurity
5. Health care
6. Video/media content
7. International trade (clearance industry)
8. Pet care industry
9. E-learning firm
10. Interpreter services
11. Higher education

Almost all were in corporate or entrepreneurial roles, with only one employed by an educational organization. Of the 12 subjects, nine were based in the U.S. and three lived in Europe.

Education

Half of the 12 interview subjects did not pursue formal university education in instructional design. "So many people come to it by accident," said Jeff, a former corporate ID who owns a learning and development business. For example: "You're really good at a thing, you excel, and you can explain and simplify concepts," he said. "Then you're the person onboarding and training the new hires."

All attended college, and six had master's degrees in other fields. One subject had a doctorate in ID, and one earned a doctorate in another field. Several completed professional training, including workshops or certifications in ID, or e-

learning software like Adobe Captivate or Articulate Storyline.

Figure 3 shows a breakdown of the 12 interview subjects' post-undergraduate education and formal training.

Respondent	Professional certification in ID or ID software	Master's or graduate certificate in ID	Master's in another field	PhD in ID	PhD in another field
1 Lee	Yes	No	Yes	No	No
2 Rebekah	Yes	No	No	No	No
3 Elsa	Yes	Yes	No	No	No
4 Monica	Yes	Yes	No	No	No
5 Rosalie	No	No	Yes	No	No
6 Georgianna	No	No	Yes	No	Yes
7 Jeff	No	No	No	No	No
8 Jackie	No	No	No	No	No
9 Kelly	Yes	Yes	Yes	No	No
10 Neil	No	Yes	No	No	No
11 Valerie	No	Yes	Yes	No	No
12 Bridget	No	Yes	Yes	Yes	No

Figure 3. Post-Undergraduate Education Cited by 12 Interview Subjects

For some practitioners, a degree in ID has seemed unnecessary. Rosalie, an education executive in the cosmetics industry who started off in sales, said: "My career seems to be doing really well without that—I've reached the level of executive director at a Fortune 500 company, which I'm so proud of. I'm really thankful for all the people who've given me practical on-the-job experience and application. Maybe if I wanted to pursue a job at another company, an MBA with an education focus would help. You never want to stop learning, but in terms of getting a formal degree, I'm not sure that's necessary at this point."

One interview subject is devoted to educating the next generation of IDs. Bridget, who has two master's degrees in other fields plus a Ph.D. in instructional systems, is a professor who emphasizes both theory and application for her undergraduate ID students. "It's important to have both the theory and the software [knowledge]," she said. "Students don't get jobs otherwise."

In Their Words: What Instructional Designers Say About the Profession

The following sections include observations and insights from the interview subjects. As this was a relatively small survey, these findings are not intended to be conclusive or definitive; instead, it is a snapshot of the field at a moment in time based on the experiences of this group of professionals.

The Definition of "Instructional Design" Is in the Eye of the Beholder

We know what "instructional design" is—don't we? We would like to think we do; as for others, like our colleagues or stakeholders, the field is not well understood. Consequentially, several interview subjects had much to say about the perceptions and common misconceptions of instructional design.

Here are some of their observations:

> "Most people in the business world do not understand it. People hear 'instructional design,' and they don't know if you're a trainer or an e-learning administrator, etc.—there is a lot of confusion over roles on an education team. They don't know what you have control over and what you don't" (Rosalie).

> "One misconception is that ID is one thing. Not everyone who does ID is good at it or does it in the same way. . . . It's the art of communication and persuasion" (Lee).

> "There is a lack of understanding about what IDs do. Some think training is always the answer to almost any problem" (Rebekah).

> "Outsiders don't quite get it. Stakeholders have unrealistic expectations" (Georgianna).

> "What 'instructional design' is depends on who you ask—it varies by the company and the projects. The term is relative" (Jeff).

In addition to a lack of understanding about ID itself, the process and the time it takes were points of sensitivity:

> "[Colleagues] see content going onto an online platform or into a workshop; they do not understand the magnitude of the process. Writing, vetting, approvals, reviews, checks and balances, uploading. It can be an arduous process. All this is required to maintain a level of trust with our stakeholders" (Rosalie).

> "Externally [people outside L&D], it's the 'order taker' mentality" (Monica). (Note: This refers to the idea that a stakeholder decides an education deliverable is needed, and L&D is there to simply take the order and produce it without question.)

> "The biggest misconception is the time frame. We constantly have to defend how long it takes to do things. A stakeholder might say, 'It's just XYZ'—they have no idea of the scope, how many places that change must be made in different materials" (Elsa).

Instructional design practitioners were also urged to resist placing too much emphasis on technology tools:

> "Some IDs are overly focused on learning software and less on making a good learning experience. They think the tech is the most important thing. Our product [a video platform] is not what is going to make you a good ID. It's about piecing the knowledge together. If you don't know ID, this will not fix that. The tech is only as good as the person manipulating it. We are putting out so much content just to put it out, it's hard to find the content that is valuable. Calm down about the tech, and focus on the theory and what makes a good learning experience" (Monica).

> "Focusing on the tech is doing a huge disservice to the field. We know how people learn and process information; that's what we should focus on" (Bridget).

Transferrable Skills

The 12 interview subjects had many skills from their previous careers and education. Several skills they mentioned have obvious utility in the work of instructional design, including:

- Communications
- Writing/technical writing
- Public speaking
- Branding
- Marketing
- Project management
- Customer service
- Fundraising (i.e., how to motivate donors often translates to how to motivate learners)

Project management can be an especially useful toolkit. Bridget, the ID professor, said that it's not necessary to pursue a project management professional (PMP) credential, but it's beneficial to know the concepts and terminology around budgets, timelines, and stakeholder management. She said these skills help get her students "prepped to leave the nest and get a job."

Neil, who works at an e-learning firm, zeroed in on the importance of writing—a skill that is valued in the hiring process at his company. "If you're a strong writer, that matters," he said. "We can work with that. If you focus on the writing, it really makes a difference."

A less obvious skillset has shaped careers in ID—the performing arts. Two interview subjects reflected on their backgrounds in the arts as helpful in their current profession.

- Jeff cited high school theater: "The stuff that helped was theater, and being creative from high school and middle school. . . . I was a theater major. In any creative or artistic field, you are more willing to take risks and be wrong. The biggest hurdle for a lot of IDs is being afraid to fail—for many adults, the creative part of the brain gets shut down."
- Rosalie, a former opera singer:
  - **On presenting:** "If I have to speak in a meeting or present to a large group, not only do I like doing it because it's performance-based, but I have a background that enables me to do so in a professional manner because I know what needs to be rehearsed in order to put my best foot forward. In a big sales meeting, I am going to rehearse what I'm going to say a million times. I want to rehearse it on the stage in the venue and get feedback. Someone could wing it, but that is not what I was taught. I learned 'what you practice is what you perform.'"
  - **On taking feedback:** "Most of what you get [as a performer] is what you can do better. For a performance, it's constructive criticism or even harsh criticism from the conductor. It's constant feedback to make the overall product better. Very rarely are you doing a solo—even if you sing alone, there is a pianist or another instrumentalist accompanying you. That transfers easily because in the business world, you can take feedback in the spirit that it was given and quickly act and make whatever changes you need to for the betterment of the business and the team."
  - **On being flexible:** "I can't tell you how many times I've been involved in an opera where the director changes the staging of a scene five days before performing it. You just have to suck it up and deal with it. There are all sorts of small tweaks in a performance career. Because of that, when a project changes, or personnel or responsibilities change, which happens all the time in the business world, you can roll with the punches because you're used to dealing with those high-pressure scenarios."

What They Wish They Knew …

Several interview subjects reflected on the question "what I wish I knew before becoming an ID". They reported the following:

- The academic terms and jargon associated with ID (What's the Kirkpatrick model? What's a Level 2 assessment? And so on . . .).
- What is a good learning objective? For example, what's the difference between "can demonstrate XYZ" or "has a working knowledge of XYZ"?
- How to use PowerPoint—it helps immensely when learning Articulate Storyline.
- Advocating/communicating what an instructional designer does and how it is valuable. Kelly, an ID in the pet care industry, said she asks her subject matter experts (SMEs, often pronounced "smeez"): "Do you like to shop on Amazon? Why do you think your students wouldn't want a seamless experience?" It's like a light bulb goes on for them, she said.
- Vendor management, specifically an LMS vendor ("I did not know I would need to do that in this role" – Elsa, in the financial services industry).
- Action mapping—Cathy Moore's [visual approach](#) to instructional design.

Every instructional designer, like these who responded to the survey, faces surprises once they are on the job. To help you anticipate some of these surprises, read through the following case vignettes and application exercises to learn more about various angles of "real" instructional design work.

LIDT in the World

The following scenarios encompass real ID issues and challenges presented by the interview subjects and what might be learned from their experiences.

#1 A New Phone System: Delivering the Right Resource to Learners

Elsa is an instructional designer with more than a decade of experience in the field. She's in an L&D department of two people at a credit union with more than 700 employees. One challenge she described was a "constant tug of war" regarding the recommendations she makes versus what the stakeholder wants.

When the company installed a new phone system, training became a "hot potato" issue—no one wanted to own it, and employees decidedly did not want to attend formal training. (Note: It's no secret that learners resist training on topics they think they already know or believe should be intuitive.) The phone system vendor and the IT department had offered a Word document that was less than user-friendly.

Elsa's solution: Create a step-by-step how-to guide based on that Word document—a digital resource easily accessed by employees that will have a long shelf life.

The takeaway: The how-to guide was not necessarily the solution envisioned by stakeholders, but it met the instructional need and the preferences of the learners. "I did the right thing for the employees," Elsa said.

#2 Learner Empathy: Putting Yourself in Their Shoes

As a longtime e-learning designer and owner of an L&D company, Jeff thrives on helping other IDs learn and improve their skills. With the [rising demand](#) for IDs* and his own well-established brand, he has no shortage of learners seeking his guidance.

One of his specialties is advising IDs on creating a portfolio of their work to show potential employers. His learners include new and early-career practitioners who need "tangible, practical steps" on what to include in their portfolio. Jeff said he has sometimes veered too much into the philosophical, theoretical side of ID and has to remind himself about what it was like to be brand-new to the field

The takeaway: A lesson in learner-centric design for IDs at any stage of their career is: As you gain knowledge and experience, it is sometimes essential to put yourself in the mindset of an absolute beginner.

*According to the Bureau of Labor Statistics, the U.S. employment outlook for instructional designers is strong, with an 11 percent increase in positions expected between 2016 and 2026.

#3 Death of a Patient: Was It a Lack of Training?

A hospital patient in the United Kingdom died, unfortunately, from an overdose of paracetamol (also known as acetaminophen). It turned out that the medication, managed in a digital system, had been overprescribed despite computer alerts to hospital staff—which were manually overridden. In the aftermath, the question arose about whether nurses had been properly trained on the electronic prescribing system—a lack of training that had dire consequences. Rebekah, a technician-turned-trainer who taught others to use the electronic system, saw the problem as something deeper than a lack of training on digital prescriptions. The staff included many nurses from less developed nations who lacked basic computer skills. They may have unwittingly overridden the fail-safe alerts with no knowledge of the potential impact. Additionally, Rebekah said she once observed a nurse struggling to even log onto a hospital computer.

The takeaway: The hospital had apparently not considered the entry skills of this population of learners. The ability to use a computer proficiently may have been assumed. Could a robust ID process (including learner analysis, task analysis, environment analysis and pilot testing) have uncovered this important detail about the learners?
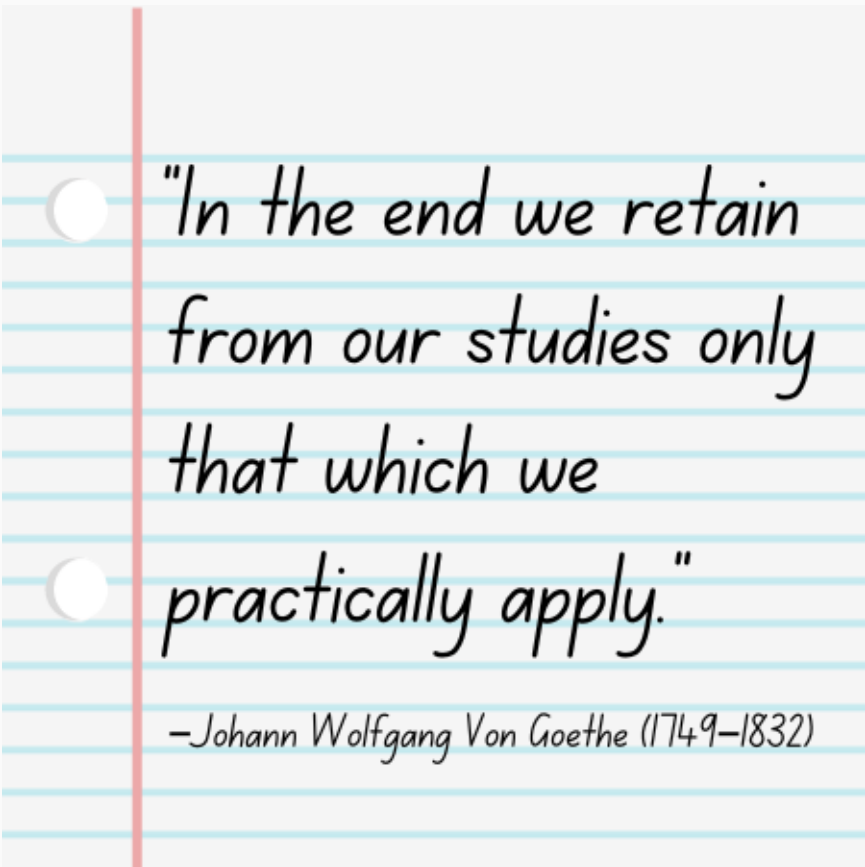
#4 Knowing vs. Doing: Inside the Mind of an ID Strategist

Here is a perpetual challenge in learning and development: ensuring people can actually use and apply what they learned. As more instructional designers are hired to help companies with their training and educational needs, stakeholders sometimes focus on what they want their employees to know—as if simply knowing certain information leads to a desired outcome.

Lee, a former marketing executive who is an ID strategist/consultant, shared this advice: "Think about what you want people to DO, not just what you want them to KNOW. How do they apply this learning in their life and work? If we are going to be seen as credible and valuable by organizations, we have to help the business achieve its goals. L&D budgets are always under scrutiny. We have to become indispensable. What are you doing to help the business? How are your deliverables helping the business get to its goals?"

She zeroed in on useless training metrics that are sometimes deployed (How many people attended? Did participants like the training?). "A CEO would think that's cute," she said. "But what is moving the needle for that business?"

The takeaway: Performance and behavior, not simply understanding, are what really count. How does the learner use the knowledge?

"In the end we retain from our studies only that which we practically apply."

–Johann Wolfgang Von Goethe (1749–1832)

#5 Being Your Own SME: Two Who Have Been There

Typically, instructional designers rely on other people who are SMEs to explain, enlighten and educate on their area of expertise. But this is not always the case.

- Before he was an ID, Jeff's specialty was retail loss prevention. He got so good at it that he was asked to help train others on what he knew. It was the first step on his path to becoming not just an ID, but a successful, award-winning designer with his own business. Being his own SME on a topic he knew well set him up for success. As he reflected on his career path, he believes that if he had entered the profession another way, he "would have failed as an ID."
- Jackie is a product trainer for a cybersecurity company. She configures devices and performs tasks, learning as she goes. "I take photos and write the step-by-step instructions," she said. In her role for about a year-and-a-half, she has become her own SME as part of her ID process and is getting a better grasp on what her learners need to know. She said her team has come to realize her value and is relying on her more and more.

The takeaway: Sometimes, IDs must get creative and become their own expert.

#6 The Award-Winning Training . . . That Didn't Actually Work

Bridget was hired as an ID at a Fortune 500 technology company that was winning awards from the industry for their training materials. When she came on board, she requested user testing; the awards (as well as focus groups and surveys) had praised the overall design and look of the materials, but she suspected that usability was subpar. She eventually discovered that, for example, a training video for server admins did not account for the noise generated in a room full of computer servers. The learners could not hear the voiceover in the video. Bridget reflected: "Could your people actually use it? And the answer was no."

The takeaway: Get to know your learners and how they consume the content. For instance, if they are primarily using mobile devices for training, it's essential that the training actually functions and looks good on mobile devices. Or, in this case, if people will be viewing the material in a typically noisy environment, then you might need a plan to accommodate for different training conditions—for example, subtitles on the video.

Practice Scenario #1

Read the following scenario and reflect on how you would handle the situation.

Your colleague, the vice president (VP) of sales at an auto dealership, says she needs a training video for new sales associates by the end of the month. Several new hires are starting next month, and she needs to get them trained quickly. You are the sole L&D professional at the company.

What would you do? (More than one option may be applicable.)

Option A: Ask the VP how new hires are currently trained. Are there other educational assets that can be deployed until you have a chance to develop a solution?
Option B: Inform the VP that you will contact a video production company right away to get started.
Option C: Tell the VP that you are a department of one and there is no way you can produce a video at all.
Option D: Inquire about the goals of the video. What does she expect the sales associates to be able to do after watching it?

Debrief: Options A and D are the right direction. As instructional designers, ideally, we want to partner with stakeholders and discover their true needs, then design and develop a solution that achieves the goal.

Practice Scenario #2

Read the following scenario and reflect on how you would handle the situation.

You are a freelance ID contracted by a driving school to work with an in-house SME on a slide presentation for an instructor-led driver training class. The SME has provided source materials and insists that all of the vocabulary for the class should appear on the slides—everything from "acceleration lane" to "yield"—dozens of words and their definitions. You explain that this will be cognitive overload for the learners, but she is adamant that the presentation include all the words on the slides.

What would you do?

Option A: Create the presentation as she has directed. She is the expert, and you do not want to create animosity with your client, the driving school.
Option B: Ask the SME to try two sample pilot versions of the presentation (6–10 slides), one with all the vocabulary and another with keywords on the slides along with a vocabulary worksheet. Test each version with a few learners, then compare the results. It's likely your version will be more effective, and the SME may be convinced by your methods.
Option C: Remind the SME that you are the expert when it comes to developing education materials, and create the presentation you envisioned. You are sure she will come around to your way of doing things.
Option D: Tell the driving school that the SME is impossible to work with. Request a different SME or inform them that you must quit the project.

Debrief: Option B is on track. But what if there is no time to pilot the materials? Or what if you pilot-test the instruction, and your materials prove more effective, but the SME still insists on doing it her way? You may need to seek guidance from the project owner about the best course of action.

Practice Scenario #3

Read the following scenario and reflect on how you would handle the situation.

You are an ID at a large health insurance company in a department that employs call-center nurses. The vice president of the department comes up with an idea for online training on how to deal with angry callers. He provides a content resource: a messy, handwritten storyboard about how he thinks the training should flow. He then asks you to "take it from there."

What would you do? (More than one option may be applicable.)

Option A. Ask the VP what problem he is trying to solve. What should the call-center nurses do differently after taking the training?

Option B. Find a SME who excels at handling angry callers, and gather their best practices and tips for the training.

Option C. Read through the storyboard and edit it for clarity and logic, then meet with the VP to work out the next steps in the process.

Option D. Investigate the current training and resources for handling angry callers. Following this investigation, present your findings to the VP. How will his training improve on what already exists?

Debrief: Options A and D are probably the best place to start. If there is already training on angry callers, what isn't working? You may need to find out whether it's a "skill or will" issue. The nurses may possess the skill but aren't willing to use it—why? Or there may be some obstacle you need to discover to get at the root of the problem.

Practice Scenario #4

Read the following scenario and reflect on how you would handle the situation.

You are a busy corporate ID at a growing restaurant chain. The onboarding process for new employees is evolving to include some e-learning and in-person training. You're asked to convert a large slide presentation (a full day of content of about 90 slides) to e-learning, and the HR director asks for the project to be completed within two weeks in order to be ready for a wave of new hires. You are in a department of two L&D professionals.

What would you do? (More than one option may be applicable.)

Option A. Stop work on other projects immediately. Ask your L&D co-worker to do the same so you can complete the e-learning by the requested date.
Option B. Ask the HR director to consider outsourcing the project to an e-learning company.
Option C. Explain to the HR director that two weeks is not enough time for you to create the e-learning modules; two months (or more, depending on other project needs) is a more realistic time frame.
Option D. Tell the HR director that you have several other projects to complete before you can take on her project; request that they continue using the slide presentation as-is until then.

Debrief: Option C and D are the most realistic. It's unlikely that you can drop what you are doing to take on this project; your other stakeholders are going to be very unhappy, and it's unfair to them and their priorities. Outsourcing the project for delivery within two weeks is probably going to be cost-prohibitive. Using the slide presentation as-is may work for a short period of time until the e-learning can be completed.

Note: You may have noticed in the practice scenarios that stakeholders frequently request a particular modality for training. Part of the challenge for IDs is to determine how the learners will get the most out of the instruction: Is it best delivered as an in-person session, webinar, video, e-learning, written guide, job aid, etc.? What is the best option for the learners (not the stakeholders)? Then consider that the best option may take too long to develop or may be very expensive. These are some of the factors you may have to balance.

Parting Words: Advice on Nurturing Your ID Career

It should come as no surprise that learning professionals keep learning and evolving as they gain experience in the field. In this section, they share some of their hard-earned wisdom and insights.

On lifelong learning:

> *"Go work for an organization that does tuition reimbursement and continue your education."* (Elsa, an ID in financial services)

On industry conferences:

> *"What I would recommend is thoroughly vetting any conference you want to attend, because they cost money. If you get there and you're not getting something applicable to your team, what a waste of time and money."* (Rosalie, who works for a cosmetics manufacturer)

On owning an L&D business:

> *"Don't be afraid of running your own show. Go do some things that are uncomfortable." (Lee, owner of a learning strategy firm)*

> *"There isn't a dollar figure that would get me to go back into a corporate ID role. As a freelancer . . . there is so much less BS. In freelance work, I don't deal with office politics. I do my work and move on to the next client." (Jeff, owner of an e-learning firm)*

On networking online*:

> *"The most difficult thing to get over is being alone [as the sole L&D employee at her location]. Things changed when I discovered ID communities. I was alone in my job, but we are a big community. You can reach out; you can share and give/receive feedback. The most important thing is sharing and being part of something. This job sometimes is lonely. But you have people worldwide who can help. Your network is essential!" (Georgianna, a corporate ID based in Europe)*

On networking in person*:

> *"I do some virtual webinars and [industry] meetups when I can. At one gathering, I found out about an accessibility course from someone I met at a pub. I was able to go to the course for free and put it on my CV. If I hadn't gone out, I wouldn't have known about it! It's nice to have a network that knows the importance of ID." (Rebekah, a health care ID)*

*5 Ways to Connect With the ID Community

1. Become a member of the [Association for Talent Development](#) or another professional organization. ATD's mission is to "empower professionals to develop talent in the workplace"; They offer courses, events, conferences, and many free resources. Many areas have local chapters for in-person networking, volunteering, and continuing education.
2. Read the books and blogs produced by authors and thought leaders in instructional design. Connect with/follow them on social media.
3. Join the [Instructional Designers](#) group and follow #instructionaldesign on LinkedIn.
4. Take advantage of alumni services, events, workshops, etc. through your undergraduate or graduate program.
5. [Join Black in L&D](#)—a community that supports and celebrates L&D professionals who are Black; for allies of the community, support or follow the group on [LinkedIn](#) and [Instagram](#).

Chapter Summary & Conclusion

Instructional designers come to the profession in countless ways and perform the job according to the processes and nuances of the organization or client employing them. A degree or certification in instructional design is generally viewed as optional to get started in the profession, and on-the-job experience is a common entryway into an ID career. In this chapter, we have met a handful of practitioners working in the field today. Their passion and enthusiasm for their work is apparent, and the insights and experiences shared here may be helpful to those entering or learning more about the real world of instructional design. Despite the challenges, the satisfaction is palpable. Valerie, an ID in interpreter services, said: "I absolutely love what I do."

Think About It!

What stories, advice or observations from this chapter resonated with you?

What useful skills did you acquire before studying instructional design? How have you used these skills throughout your education journey?

How did you decide to study instructional design? How will you know if you are successful in your career?

Mary Armstrong

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Professional Ethics for LIDT as Reflection, Interrogation, and Design

Stephanie L. Moore, Heather K. Tillberg-Webb, & Ahmed Lachheb

Design   Ethics   Instructional Design   Reflection

Professional ethics are reflected in the design decisions we make. They arise in our considerations of how decisions will impact individuals and the environment, as well as organizations we serve with our learning and instructional design work. In this chapter, we argue the importance of ethics in the learning and instructional design and technology (LIDT) field, for newcomers and current practitioners alike. Cognizant of how ethics are often discussed in terms of codes of conduct, we first problematize a disconnect and some limitations of the codes-based approaches. We then offer a different way to think about professional ethics in LIDT by advancing an approach that reframes professional ethics as three central practices: reflection, interrogation, and design. We offer practical designerly tools for ethics that LIDT practitioners can use to support the integration of ethics into design work and technology decision making. These three practices—reflection, interrogation, and design—offer fresh ways to think about professional ethics and professional practice. By reframing ethics, we can turn them into parameters and specifications that can then be folded into learning technology designs, artifacts, projects and decision making.

While professional ethics are often discussed in terms of codes of conduct, we want to offer a different way to think about professional ethics in learning and instructional design and technology (LIDT). In *The Goods of Design*, Guersenzvaig (2021) questioned whether professional codes of ethics or codes of conduct are really the best way to frame or integrate ethics into practice. He stated, "Codes of ethics and codes of conduct are documents that lay down guidelines for recommended, required, or forbidden behavior, but they are not the same as professional ethics" (2021, p. 54). He argued instead that professional ethics are "a larger endeavor that is open to substantiated disagreements emanating from the multiple perspectives that may participate in the discipline" (2021, p. 51).

Other moral philosophers, such as Ladd, go even further, calling codes of ethics an "intellectual and moral absurdity" (1998, p. 211) because codes of conduct use ethics as a normative tool that emphasizes a compliance orientation. Ladd argued that this robs individuals of their moral agency. Guersenzvaig countered that even when a code of ethics is available—as we have in LIDT (see resource at the end of this article)—professionals still must exercise a great deal of agency both in interpreting any such codes and in applying these ideas to complex and open-ended ethical considerations. In authentic practice, professional designers and technologists still need to be able to identify ethical dimensions of a given project, situation, or context, then decide how they apply their ethical perspectives to their work. Several studies also indicate that codes of ethics do not impact actual practice (c.f. Boatright, 2013; McNamara et al., 2018), and in the field of LIDT, Moore (2021) observed a disconnect between codes of ethics in LIDT and design models that represent practice.

To address this disconnect and some of the limitations of a codes-based approach, we advance an approach that reframes professional ethics in LIDT as three central practices: **reflection, interrogation, and design** (Moore & Tillberg-Webb, 2023; see Figure 1). These core practices better situate professional ethics in a context of application and offer fresh ways we can think about both professional ethics and professional practice.
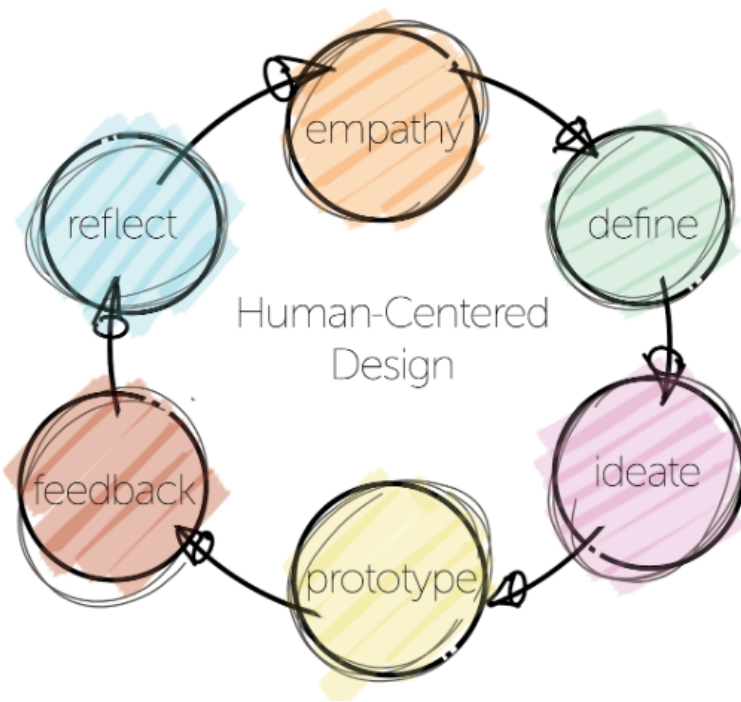
Image courtesy of Blake Wigdahl at Western Architectural Services.

Figure 1. Reflection-Interrogation-Design Framework for LIDT Professional Ethics (Moore & Tillberg-Webb, 2023)

In LIDT, several historical articles that aimed to define the field, curated in Ely and Plomp (1996), emphasized the importance of ethics and ethical considerations in addition to the importance of developing professional methods. These authors argued for having a professional code of ethics but also urged continual reflection on the ethical implications of educational technology as a form of professional responsibility. Their ideas on professionalization of the field can serve as a foundation for framing ethical practice as reflection, questioning, and design. In the following sections, we will revive the arguments from these foundational authors. Key ideas from these writings help to lay the groundwork for reflection, interrogation, and design as a framework for professional ethics in instructional design and technology.

Professional Ethics as Reflection

The philosopher Pauline Shanks Kaurin defined ethics as the process of "reflection, critical questioning, justification, argumentation, and application of moral beliefs, ideas, and systems" (2018, para. 4). This emphasis on ethics as a process rather than as a statement or set of beliefs/standards is helpful. Rather than thinking about ethics as a set of philosophies one must study or codes to which one must adhere, a more useful approach—especially for a design- and technology-oriented discipline—is to think of ethics as a process for reflection, questioning, and application.

As early educational technology researchers encountered the range of possibilities introduced by new media, they also cautioned about the careful analysis, planning, and reflection that should inherently be part of the incorporation of new technologies into instruction. Davies wrote, "while technology expands the range of creative possibilities and choices, it also makes it more difficult to foresee the full consequences of the choices made and the actions taken" (1996, p. 15; originally published in 1978). He argued that the options presented by technology require contemplation and reflection, particularly in relation to how that technology is being used to solve a specific, well-defined problem. He noted that this often contradicts the enjoyment that many practitioners find in the "doing" of design and educational technology.

If you are new to the field of instructional design, you may have enrolled in a course on instructional design, expecting to immediately delve into design and development phases of a project. It can be disorienting to instead spend a significant amount of time engaging in needs analysis phases and to conduct learner, contextual, and task analyses. However, careful considerations of the instructional problem, the needs of the learner, the parameters of the context, and the specifics of the performance task ensure appropriate contemplation of the problem. As part of that process, designers also need to consider potential harms and benefits, both for

individuals as well as more systemic impacts, and devise solutions that aim to maximize benefits and minimize harms. These professional methods and the embedding of ethical reflection into those methods are hallmarks of professional practice.

The Reflective Practitioner

Thinking of ethics as a reflective process meshes well with Schön's (1983) idea of the reflective practitioner. A reflective practitioner is a professional who continuously incorporates lessons learned from past decisions and experiences to inform present decisions to improve future outcomes. Schön's concept of the reflective practitioner, described in his book by the same name, emphasized reflection as a cornerstone of professional design practice. Schön argued that reflection can occur mid-action and not just after an action has occurred. In fact, when Schön described reflection, he was primarily concerned with reflection-*in*-action, not just reflection-*after*-action. During the process of confronting a problematic situation, including problem setting and the various phases of the design process, designers typically engage in an iterative conversation with the situation or problem, throughout the design process. Tracey and Baaki (2014) described what reflection-in-action looks like for designers:

> "When a designer is presented with a complex problem or situation, the designer shows a series of questioning, making a decision, reflecting on the consequences of the decision, then making another move" (p. 4).

This iterative reflection-in-action is central to professional ethics in LIDT. Understood this way, ethics become a specific form of reflection-in-action in which we ask particular types of questions and reflect on decisions during different design phases and tasks (which of these you engage in may vary depending on your job or role). Moore and Griffin (2022) suggested that by merging Kaurin's definition of ethics as a reflective process with Schön's idea of the reflective designer, we can begin to see how ethics can become embedded in the design process. *Embedded ethics* thus become a form of reflection-in-action, affording many opportunities for ethical reflections to be integrated into every phase of the design process.

For example, at the beginning of a design effort, designers can reflect on the nature of the problem they are working on, something Schön (1983) called "problem setting" and Svihla (2020) called "problem framing." Svihla defined problem framing as when a designer acts "to take ownership of and iteratively define what the problem really is, decide what should be included and excluded, and decide how to proceed in solving it" (2020 para. 2) This means that every designer can frame a problem differently. They often do so even if they have not probed their underlying assumptions, perspectives, beliefs and so on to understand how those are informing their problem framing. Because individual designers frame problems differently, they produce different solutions and end up solving different problems. Where one designer may see a technological problem, another designer may see a social justice, equity, or accessibility problem and thus develop different solutions.

Think About It!

Embedded ethics: Reflection-in-action
(from Moore & Tillberg-Webb, 2023)

Applying ideas from this chapter:

Framing – What can you do as part of a framing exercise for any role, context, or project to incorporate various principles or ethical considerations or standards into the project?

Questions/Prompts – What are some key questions you can keep in front of you for any role, context, or project to remind me to consider important ethical dimensions of the project or problem?

Reflective practice – What are some reflective practices (reflective writing, critiquing designs, after-action reviews) you can adopt?

Variations – What are some practices you might use in one situation but not for another? For example, how might you adapt stakeholder involvement from one project or context to the next?

LIDT in the World: Using Ethics to Inform Technology Selection and Reflective Practices

Consider one everyday example: selecting tools for learning assessment. One designer or educator may focus on the learning outcomes to be assessed and select a tool based on that framing. Another designer or educator may focus both on learning outcomes and incorporate considerations of equity and privacy; based on that, they may select a different tool because they have framed the problem differently. Ethics as reflection means intentionally reflecting on possible ethical dimensions of the problem space. Doing so is essential to incorporate ethical dimensions into how the problem is framed. Therefore, ethics impact instructional designs and technology selections or implementations.

A nice example of this is Rice's (2022) study on the use of technologies for special education during COVID-19. The teachers in Rice's study evidenced reflective practice as they rethought their initial technology selections and uses. One teacher rethought her use of muting features in Zoom and changed it to give students more voice and power. Another had originally turned off chat features but then realized that introduced barriers to asking questions, creating community, and engaging in discussions. Upon reflection, she adapted her use of the tool to make her classroom more open and inclusive.

Moore & Tillberg-Webb (2023) provide some examples of questions that could be asked to incorporate ethical considerations into any technology selection or evaluation process:

Accessibility	Data Practices	Soft Impacts
Does the vendor embrace accessibility and a commitment to continually improve the product in alignment with accessibility standards? What sort of documentation does the vendor provide on accessibility? Has the interface been tested? If there are interactive features, are those accessible for users to participate in meaning making activites?	Does the vendor provide clear statements about the security of their platform? If you are using an integrated system with any institutional organizational systems, what data is passing between systems, and what level of security is in place? Who will have access to information shared with the tool, and is that clear to ALL users? Will users have a say in what is shared or not?	How will the technology shape or influence how learners and instructors communicate? Does the technology or design potentially have psychological impact on the learner? Are there ways in which the tool's features or design will foster or trigger addictive behaviors?

Ethical reflection can also be embedded throughout design, development, implementation, and evaluation design phases and activities. For example, Moore and Tillberg-Webb (2023) recommended developing a set of questions that designers could put on a sticky note or a whiteboard to revisit throughout the design and development process. The following are some examples of reflective questions that can prompt embedded reflection:

- Do my choices inadvertently reflect racial or gender stereotypes? Should I redesign the scenario or characters?
- Will the strategies I selected meet the needs of diverse learners, or should I expand my strategy and modality choices to design more inclusive learning environments?
- Will any of the technologies I've selected introduce barriers for learners? If so, how can I reduce or remove those barriers through changing my choices, redesigning or modifying a solution, or introducing alternatives?
- How affordable is this solution? Is there a way I could lessen any possible digital divides for the learners I'm working with?
- Are learners empowered to choose what is collected on them and what happens with that data? How can evaluation and/or procurement processes or policies be leveraged to better support learners' data rights and privacy?

Furthermore, being a reflective practitioner also means better understanding one's values, interests, background, and beliefs that influence their design activities and their presence as designers in the process. That introspection can encourage practitioners to be more intentional. For example, some designers establish design philosophies for their work or for a project (Gray & Boling, 2016), like articulating a commitment to accessibility and inclusive design as explicit framing for a project or process.

Professional Ethics as Interrogation

For both reflection and interrogation, the main way to engage is through critical questioning. However, ethics as interrogation leans more into thinking critically about technology. Interrogating technology involves asking critical questions about means and ends and the evolving nature of each as new technologies emerge. It also involves better understanding different views of technology, including how these influence different ethical perspectives on technology and how we can employ analytic frameworks that help us better understand relationships between technologies, societies, and cultures.

Ends and Means for LIDT

You may have heard the expression, "the ends justify the means" attributed to Machiavelli to justify any action to achieve political outcomes. In contrast, in educational writing, we have a rich history of noting that the means are just as important as the ends, starting with John Dewey. Dewey's philosophical considerations in education have permeated many educational fields. The majority of his works viewed the relationship between ends and means in education as an ongoing process of interaction and adjustment (Waks, 1999). Dewey believed that education could not only focus on the end but also on the continual process of growth and development, working reciprocally with that end goal.

Considering the relationship between ends and means and contemplating both together is essential to thoughtful practice as a designer as recognized by Finn (1996). In his piece curated in the Ely and Plomp collection, Finn (1996, original published in 1962) called on instructional technologists to "pay more instead of less attention to Dewey on the question of means and ends in education" (1996, p. 51). Finn argued that technology should not be defined as a collection of gadgets, hardware, or instrumentation but instead as "a way of thinking about certain classes of problems and their solutions" (1996, p. 48). This resonates with Davies' argument that there are three possible archetypes for the LIDT profession—the Audio-Visual archetype, the Engineering archetype, and the Problem-Solving archetype—and that we should arc more towards the latter. While the first two treat technology that will either lead to technical skills or to automate learning and instruction, the third treats technology as a process for solving problems. This requires a focus on and understanding of real problems that should be addressed. Today, Davies thoughts are echoed in contemporary calls for our field to shift from its emphasis on *things* to an emphasis on how we help *solve meaningful problems* (Reeves & Reeves, 2015; Reeves & Lin, 2020).

Another foundational figure in the field—Roger Kaufman—emphasized the importance of distinguishing between "ends" and "means" (Kaufman et al., 1969; Kaufman, 1996, 2000). Kaufman defined ends as the results, impacts, or accomplishments achieved using means; and he defined means as the processes, activities, resources, methods, or techniques used to deliver a result. His framework for educational planning and evaluation emphasized societal impact as the starting point for planning and the end point for evaluation. He argued that "this external referent should be the starting place for functional and useful educational planning, design, implementation, and evaluation—if education does not allow learners to live better and contribute better, it probably is not worth doing" (1996, p. 112, reprinted from 1977).

Thus, the ends of educational technology become the starting point for contemplation. Kaufman defined this as describing the desirable impacts that are articulated as strategic objectives which are then integrated into the rest of the planning or design process. In short, problem framing can start with defining the desired impacts, which should include not only learning outcomes but other types of outcomes as well. Kaufman argued that these impacts happen whether or not we plan or design for them, so it is better to be more intentional and aim towards desired outcomes. Rather than accepting unintended outcomes, we can articulate desired impacts on learners, on systems, on society as objectives that then inform planning and design decisions. One tool we have in practice for

articulating desired impacts is the learning objectives; our use of objectives as a mediating tool that frames the problems we solve can be expanded to include desired impacts in addition to learning outcomes.

Critical Theory for LIDT

A central focus of interrogation in ethical practice relates to the interrogation of technologies and tools. The LIDT field has expanded and continues to do so because of the ongoing emergence of new technologies that necessitate professional methods guided by a focus on learning outcomes and assessments to meet those outcomes. Professional methods in LIDT stand in contrast to the "shiny object syndrome" of a technology-centric approach to instructional solutions, where technology solutions are presented but it is not clear exactly what instructional problem or priority they will solve (see Gibbons, 2003 for more, and available online at https://edtechbooks.org/lidtfoundations/what_and_how_do_designers_design). A technology-centric orientation in our profession often drives the inclination to want to try out new software and hardware before knowing whether it will be of value.

To develop professional methods that reorganize the relationships between technology and learning, we have to be able to critically unpack and evaluate underlying beliefs and philosophies toward technology. These philosophical underpinnings regarding how we engage with technology in our field become important background knowledge as we begin to unpack how we interrogate our use of technology. The three major paradigms of thought that inform different ways of thinking about technology, and therefore different ethical perspectives, are **modernism**, **postmodernism**, and **metamodernism**.

The **modernist** perspective towards technology reflects a view of technology as a continual march towards progress. Modernist ideas embrace objective truth, order, structure, rationality, and optimism. Modernism also brought us processes like the assembly line in manufacturing, rigid lines, and a focus on function in architecture. It also brough us constructs like rigor in education. A modernist view of ethics of technology suggests that technology is neutral because it is a derivative of the scientific process. Stemming from a positivist paradigm, modernism assumes that the scientific process is objective and neutral, and that technology is the byproduct of that objective process, so it is therefore not subject to ethical scrutiny. Historically, LIDT has strong modernist influences (see Bradshaw, 2017, 2018), which explains why we have design models that do not explicitly address the messier implications of ethical issues in our designs.

While many models and tools in the field are rooted in modernist ideas, other models arose as reactions to modernism and are influenced by **postmodernism**. For example, learning objectives reflect a modernist idea and are still used, but there is also increased interest in empowering pedagogy in instructional design through active learning and engagement and partnership with learners around the learning experience. Postmodernist thinkers posited that there are multiple subjective, relative truths, which gave rise and voice to new theoretical perspectives such as feminist theory, ecological theory, and post-colonial theory. Postmodernism includes critical questioning of all knowledge, deconstruction, irony, and rejection of grand narratives. Jonassen (2013) identified postmodern critiques that are applicable to educational technology, such as technology as power and a mechanism of control, technoglobalism, and the commoditization of education. You may also be familiar with constructivism, an epistemological framework arising from postmodern thought that posits there is no objective reality or truth, rather that our realities and truths (and therefore our knowledge) are subjectively constructed. In educational environments, the infusion of constructivism has influenced redefinitions of the role of the instructor, student roles in learning, and our understanding of how learners construct knowledge. In addition, critical theories have helped to interrogate and critique technologies in a way that modernist approaches simply could not.

A more recent philosophical development—**metamodernism**—has arisen to assist with navigating the natural tensions between modernism and postmodernism. Modernism often reflected an unbridled enthusiasm for technology and devolved into optimistic technological determinism. Post-modernism most often reflected critiques of technology, and often devolved into pessimistic technological determinism and irony with no path forward for action. Metamodernism aims to translate the postmodernist critique into a path forward that also resuscitates some of the optimism and sense of action inherent in modernism. Yousef (2017) illustrated how a metamodern stance helps navigate both these philosophical underpinnings, represented in Table 1.

Modernism	*Postmodernism*	*Metamodernism*
Belief in rational thought	Belief in irrational thought	Belief in real things
Universal values	Local values	Ethics
Unity	Plurality	Proliferation
Empathy	Apathy	Engagement
Accepts grand narratives	Accepts small narratives	Accepts both grand and small narratives
Promotes truth and certainty	Promotes irony and doubt	Promotes balance between truth and irony
		Values reconstruction
		Promotes duality
		Socially oriented

Values construction	Values deconstruction	Belief in oscillation
Promotes uniformity	Promotes plurality	Polarities and tensions
Apolitical	Politically oriented	
Belief in permanence	Belief in transience	
Linear thinking	Circular, rhizomatic thinking	

Table 1. Modernism, postmodernism, and metamodernism, adapted from Yousef (2017, p. 43)

Metamodernism is not a different philosophical approach, but rather an oscillation between modernism and postmodernism, like a pendulum swinging between these approaches (Yousef, 2017). "Metamodernism oscillates . . . between a modern enthusiasm and a postmodern irony, between hope and melancholy, between naiveté and knowingness, empathy and apathy, unity and plurality, totality and fragmentation, purity and ambiguity" (Vermeulen & van den Akker, 2010, p. 6). Yousef explained that, rather than being dismissive of postmodern ideas, the metamodernist approach uses some of postmodernism's ideas and critiques, but also expresses a concern for "real, essential issues" (Yousef, 2017, p. 39).

In applying metamodernism to LIDT, Moore (2022) argued that metamodernist framing can help us simultaneously acknowledge the fractures, needs, shortcomings, and inequities in learning technology designs and implementations. Metamodernist framing can help us *also* frame those fractures as "real, essential issues" that require responses and actions, not just critiques and analysis or devolution into nihilism. Engagement in solving real needs or problems becomes a crucial reconstructive strategy, a form of pragmatic idealism. In the words of Le Cunff (2022), "yes the planet is dying, but maybe we can do something" (para. 10). We can both critically interrogate technology along with the power structures and inequities it contributes to, and we can use that understanding to devise solutions to difficult and complex learning needs and problems. This leads to using design as a powerful tool in the metamodernist toolkit, which we further explore below.

One way to balance both critiques and possibilities is to map out potential benefits and potential harms of an existing or emerging technology rather than treat these as design specifications or requirements when maximizing benefits and minimizing harms. One very old example of this is the emergence of writing in education. In *Phaedrus*, Plato originally argued that writing presented too many potential issues and therefore should not be used in the academy (Plato, 370 BC/1990). This represents a rather simplistic approach to critiques that results in binary decisions to accept or reject. In contrast, Quintillian (1990) argued that writing had both potential benefits and potential pitfalls. He argued that it should be used in the academy and described how writing could be used to benefit learners but also when writing should not be used so as to minimize concerning negative impacts.

A much more contemporary approach is exemplified in Scholes (2016) where she outlined potential benefits and harms for learning analytics and identified key principles that can help guide the critique of learning analytics and inform possible solutions and uses. She started with the question of how students are perceived and treated in one's vision for the technology. Then, drawing on principles of agency, transparency, consent, choice, privacy, and security, she outlined how the use and implementation of learning analytics that might be designed in such a way as to reap the benefits. For example, learning analytics could be used for purposes such as identifying students at greater risk of failing or dropping out, while minimizing the risks of using analytics for normative practices. These risks can lead to discrimination, loss of individual agency and control over personal data, and obscuring or losing individual needs because of over-reliance on group-based analysis. Based on her analysis, Scholes advanced recommendations that aim to balance individual analytics with group analytics. She also identified how instructional designers can design for individual choice, effort, and achievement and can discern static risk factors from dynamic ones that could be changed if learners were provided an instructional intervention. Her analysis exemplifies how ethical reflection is not simply about accepting or rejecting technologies but about devising (i.e. designing) possible solutions.

LIDT in the World: AI and Other Emerging Technologies

Each new technology seems to present a new cycle of hype where initial praise or critiques focus solely on possibilities or concerns that tend towards binary conclusions, like accept or reject. Historically, however, over time a less-polarized analysis unfolds, as seen in the examples from Quintillian (1990) and Scholes (2016), where a more design-based approach is used to devise solutions or uses that maximize benefits and minimize harms.

New AI technologies, such as ChatGPT and Dall-E present a range of both potential benefits and harms. Potential benefits could be serving as a form of writing support or scaffolding for students or using ChatGPT to draft ideas. Potential harms could include concerns about academic integrity; impacts on actual learning and understanding; and questions about authorship, accountability, and bias in AI algorithms.

By interrogating the technologies from different ethical perspectives, we can begin to map out the detriments. For example, you could interrogate a technology using different principles such as justice, equity, consent, and privacy. Using several principles, what are some potential benefits and harms you can identify related to AI for learning? Another approach might be a care-based perspective or even combining care theory with feminist theory to ask questions about impacts on relationships and power balances or imbalances. Using care theory and/or feminist theory, what are some potential harms and potential benefits?

Application Activity

Think of a technology that you feel can be beneficial to the learners you want to design for. It could be something as ubiquitous as online learning, YouTube, social media, or anything else. For this technology, create a chart summarizing *both* potential harms and benefits. Once you have charted the ethical space, use that to inform brainstorming of possible solutions.

Professional Ethics as Design

As we mentioned earlier, design is a powerful tool for translating reflection and interrogation into application. Applied fields such as LIDT need a theory of action in concert with critical theories. Design is an excellent candidate to be that theory of action in part because it is so central to LIDT practice. Coming from engineering, which is another applied field centered around design and technology, Whitbeck (1996) argued that many ethical problems are similar to design problems. She explained that, for both types of problems, there is rarely one unique or perfect solution. Observing that too much of the standard discourse on ethics is confined to a "judge's perspective," she made the case that ethics should not be limited to an evaluative or judgment process of determining right or wrong. She stated, "It is not enough to be able to evaluate well-defined actions, motives, etc., because actual moral problems are not multiple-choice problems. One must *devise* possible courses of action as well as evaluate them" (1996, p. 9). Because ethical and moral problems require responses in the form of practical solutions, they are practical problems, not just philosophical ones. The act of responding to these complex problems by devising possible solutions is the act of design. **Thinking of ethics as design, we can start to see how our design activities are a form of acting on and responding to the ethical dimensions of the problems we work on in LIDT.**

Some problems we work on may primarily be more technical or pedagogical in nature yet still have ethical dimensions. For example, when building an online learning initiative, much of the focus will be on technological and pedagogical features. Yet there are still embedded ethical considerations such as accessibility, affordability, copyright, and equity and justice issues. In other cases, the ethical problem may be the primary problem, such as initiatives where the primary focus is to increase access to education and provide learners more equitable access to educational opportunities as well as the job prospects connected to those educational opportunities. Additionally, there are ripple effects of the technologies we implement and design decisions we make—places where choices can be decided differently to accomplish different outcomes and impacts. For example, the introduction of proctoring software can lead to violations of student privacy and dignity (Glass, 2021; Harwell, 2020) and also create unjust situations where learners with darker skin or neurological diversity (e.g., students with ADHD) are flagged for cheating behaviors at a higher rate than their white counterparts (Grother et al., 2019). Considering those potential effects is a form of acting on an ethical problem through our design, development, selection, and implementation processes and practices.

Practical Designerly Tools for Ethics

To support LIDT professionals in embedding ethics in design, we want to explore some designerly tools. Many of our common tools and methods can be adjusted and built upon. Here, we offer a few examples. Moore and Tillberg-Webb (2023) elaborated on many more ideas.

As stated earlier, in LIDT practice, professional designers and technologists need to be able to identify ethical dimensions of a given project, situation, or context, then decide how they apply their ethical perspectives to their work. One of the most practical and designerly tools that designers use in LIDT is the Framework for Ethical Decision Making by the [Markkula Center for Applied Ethics](#) (2021) at Santa Clara University. This framework includes a five-step process where designers ask questions in a reflective manner and, based on the answers to these actions, act in an ethical manner (Figure 2).
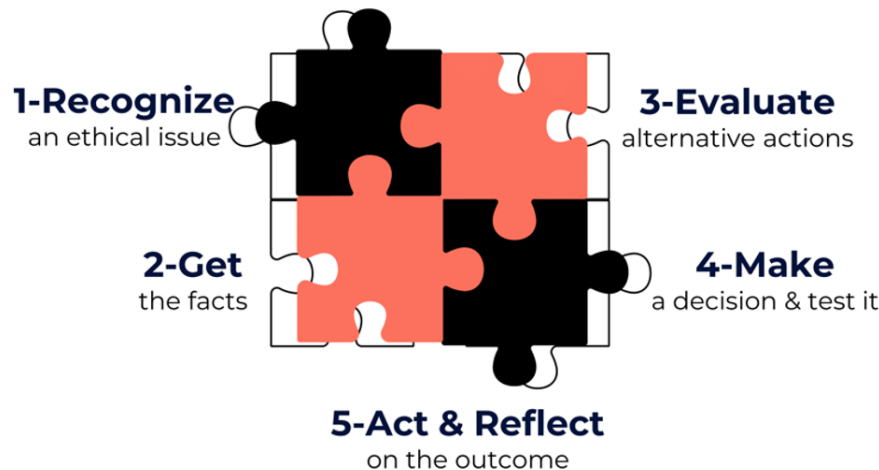
Figure 2. The Five Steps in the Framework for Ethical Decision Making by the Markkula Center for Applied Ethics at Santa Clara University. Image by Ahmed Lachheb.

Identifying Ethical Issues in the Problem Framing Stage

The five steps of the Framework for Ethical Decision Making could be embedded throughout the design process. Yet, we think it is important to rely on the framework earlier in the problem framing stage of the design process. As alluded earlier, in the process of problem framing, ethical reflection can start when designers pause to consider whether their choices inadvertently reflect any harm (e.g., racial or gender stereotypes). In this stage, designers can identify the ethical issues that could be inherent in their design project by asking the following guiding questions:

- Could this [framing] decision or situation be damaging to someone or to some group? Could it be inequitably beneficial to people?
- Does this decision [framing] involve a choice between a good and bad alternative, or perhaps between two "goods" or between two "bads"?
- Is this issue [identified in the framing stage] about more than solely what is legal or what is most efficient? If so, how?

The answers to these questions not only aid designers in identifying the ethical questions early in the problem framing stage, but also encourage the designer to be more intentional in their actions.

Embedding Ethics Throughout the Design Process Through the Use of Reflection-in-Action

To become a reflective practitioner who is continuously reflecting on their design action while engaged in design (reflection-in-action, Schön, 1983), it is important to intentionally think of ethics when confronting any dilemma or a design issue. Throughout the design process, designers can seek facts and evaluate alternative actions in order to make ethically-driven design decisions; these are the second and the third steps of the Framework for Ethical Decision Making. To do so, a designer could ask the following guiding questions:

Seeking Facts

- What are the relevant facts of the case? What facts are not known? Can I learn more about the situation? Do I know enough to make a decision?
- What individuals and groups have an important stake in the outcome? Are the concerns of some of those individuals or groups more important? Why?
- What are the options for acting? Have all the relevant persons and groups been consulted? Have I identified creative options?

Evaluating Alternative Actions

- Which option best respects the rights of all who are stakeholders? (The Rights Lens)
- Which option treats people fairly, giving them each what they are due? (The Justice Lens)
- Which option will produce the most good and do the least harm for as many stakeholders as possible? (The Utilitarian Lens)
- Which option best serves the community as a whole and not just some members? (The Common Good Lens)
- Which option leads me to act as the sort of person I want to be? (The Virtue Lens)
- Which option appropriately takes into account the relationships, concerns, and feelings of all stakeholders? (The Care Ethics Lens)

Once a designer answers these questions—and applies the different lenses attached to each question—they would be able to choose an option for design action and test it, possibly during the *formative evaluation* stage of the design stage; this is the fourth step of the Framework for Ethical Decision Making. This test would essentially evaluate their ethically driven design decisions, and reveal any possible shortcomings or "blind spots" through asking the following questions:

- After an evaluation using all of these [above] lenses is carried out, which option best addresses the situation?
- If I told someone I respect (or a public audience) which option I have chosen, what would they say?
- How can my decision be implemented with the greatest care and attention to the concerns of all stakeholders?

The result of this test and the answer to the last question would guide a designer to implement their final design decision when their design outcome is about to be released to the target audience/stakeholders; this is the fifth step of the Framework for Ethical Decision Making. Still, by relying on reflection-in-action, a designer could ask the following question:

- How did my decision turn out, and what have I learned from this specific situation? What (if any) follow-up actions should I take?

Assuming the designer made ethically driven design decisions throughout their design process, the answer to this question could bring some comfort and a confirmation to the designer regarding their good design work. It could also bring a tension that they have not explored or been fully aware of in their design practice, which could prompt them to take follow-up actions that either apply to their design process, or outcome, or both.

Conclusion

While there may be a disconnect between documented codes of ethics and designers' practices, ethics still show up in our professional activities. In addition to problem framing and reflection-in-action, we can also use common practices such as stakeholder involvement to embed ethics in practice. Research on change and technology integration repeatedly underscore how essential stakeholder involvement is for accomplishing successful design and implementation (see Ellsworth, 2000; Faber, 1998; Rogers, 2010). In thinking about stakeholder involvement from a professional ethics perspective, ignoring or leaving out stakeholders can also be a form of marginalization where some opinions, beliefs and values are pushed to the periphery while other voices have central influence.

Other design fields, such as service design (Stickdorn et al., 2018), have made stakeholder involvement central to their design processes—including extensive mapping of stakeholders and their values and creating opportunities throughout the entire process for stakeholder engagement. Some design frameworks that emphasize stakeholder involvement more have emerged. For example, participatory design (Cook-Sather, 2003; Könings et al., 2005, 2011, 2014) and emancipatory design (Noel, 2016) both endeavor to reframe our relationships as designers with those for whom—or with whom—we are designing. Both have similar roots in other design disciplines where designers sought to recognize power imbalances in the design process and adapt design practices to empower intended users.

Professional ethics are reflected in the decisions we make. They arise in our considerations of how decisions will impact individuals and the environment, as well as organizations. Ethical issues arise as embedded features of the problems that we are working on, so

designers often confront these issues in practice even if they are not represented in design models. By reframing ethics, we can think of them as forms of reflection, interrogation, and design and turn them into parameters and specifications that shape the designs, artifacts, and projects we work on.

Expand Your Library: Further Recommended Readings

The following form a good "starter set" for reading and learning more on more applied and embedded approaches to ethics for LIDT professionals:

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Appendix A – Relevant Codes of Ethics / Policy Principles

Association of Educational Communications and Technology (AECT) Code of Ethics:
https://www.aect.org/docs/AECT_Code_of_Ethic-March2016.pdf

International Society for Performance Improvement (ISPI) Code of Ethics:
https://ispi.org/page/CodeofEthics

International Society for Technology in Education (ISTE) Policy Principles:
https://www.iste.org/advocacy/advocacy-platform

Association for Talent Development (ATD) Code of Ethics:
https://www.td.org/about/vision-mission-code-of-ethics

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Careers in Government and Military

Rob Nyland, Dina Kurzweil, & Christina K. Parker

Careers   Graduate Students   Military   Government

> ## Author's Note
>
> The opinions or assertions contained herein are the private ones of the authors/speakers and are not to be construed as official or reflecting the views of the Department of Defense, the Uniformed Services University of the Health Sciences, or any other agency of the U.S. government.

When considering potential careers, consider that you could use your skills in Learning & Instructional Design and Technology (LIDT) to serve the public good and/or help support those who serve in the government/military. Every day, thousands of individuals work in full-time, part-time, and contractor capacities as LIDT professionals for the United States (U.S.) government.

It should be noted that just as in private industry, individuals working in LIDT in the U.S. government have many titles. These titles include instructional systems specialist, instructional designer, instructional systems designer, learning engineer, learning architect, training specialist, or instructional technology manager. During this chapter, we will refer to these roles by the common nomenclature of "instructional designer."

The goal of this chapter is to provide you an entry point for U.S. government instructional design work by:

- explaining the role of an instructional designer in the government and military
- recognizing the benefits and challenges associated with these positions
- describing ways to find jobs in these fields
- stating formats that are used for education and training in the U.S. government
- identifying design processes used in the U.S. government
- sharing research and professional development opportunities within the field

It should be noted that the authors of this chapter work for the United States government, so the chapter is specific to the United States. However, you might be able to generalize some of these topics to local, state, and international government work.

What is an Instructional Designer in the Federal Government?

In the U.S. government, an instructional designer applies learning sciences and theories while implementing a systematic approach to the design and development of curriculum components. This includes content, learning activities, instructional materials, presentations, and job aids.

The U.S. government uses numerical codes (0000 through 9000) to identify and define the type of work that is done by an employee. Each professional category, and specific jobs that fall within that category, are designated and often referred to by a numerical job series code. For a full description of all of the jobs in the series, and their associated qualifications, review the U.S. Office of Personnel Management's Handbook of Occupational Groups and Families (2018).

In the case of the profession highlighted by this book and chapter, all civilian education professionals are categorized by the 1700 job series. The most frequently encountered 1700 job series professionals are the 1701, 1712, 1730, and the 1750. The 1701 job series covers general education and training professionals. More often, these will be administrators of the educational and training programs or personnel. The 1712 job series designates instructors. These personnel frequently have previous military experience and embody subject matter expertise with the content they will teach. The 1730 job series is for education researchers.

Accordingly, the role of an instructional designer is typically associated with the 1750 job series—Instructional Systems—whose duties are outlined in the Position Classification Flysheet for the Instructional Systems Series (1991):

This series includes professional positions the duties of which are to administer, supervise, advise on, design, develop, or provide educational or training services in formal education or training programs. The work requires knowledge of learning theory and the principles, methods, practices and techniques of one or more specialties of the instructional systems field. The work may require knowledge of one or more subjects or occupations in which educational or training instruction is provided.

According to the Fedscope database, as of September 2022, there were 2,322 instructional systems specialists working in the federal government—an amount that has remained consistent for the past five years. In Figure 1, you will see this number compared to other roles in the 1700 (Education) job series.
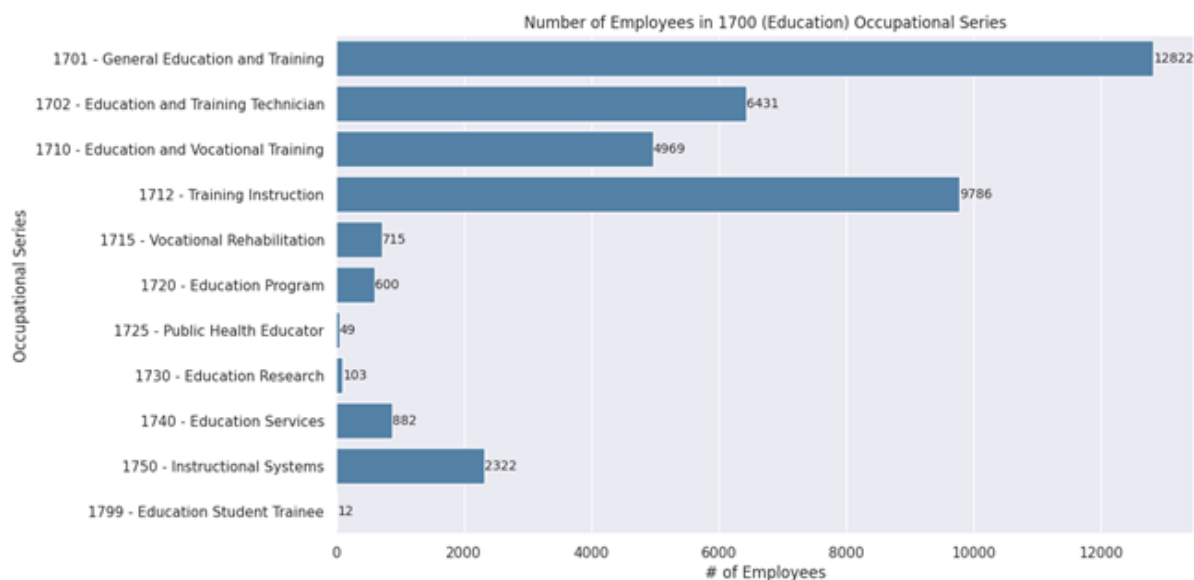
Figure 1. Number of Employees in Each 1700 (Education) Occupational Series.

Interestingly, as opposed to many jobs in the training field that do not require a specific educational background, instructional systems positions require that you have formal education related to instructional design; this means that you should have a degree that includes at least 24 semester hours related to four of the five following areas:

- **learning theory, psychology of learning, educational psychology:** study of learning theories as they relate to the systematic design, development, and validation of instructional material
- **instructional design practices:** study of the principles and techniques used in designing training programs, developing design strategy and models, and applying design methods to the improvement of instructional effectiveness
- **educational evaluation:** study of the techniques for evaluating the effectiveness of instructional/educational programs, including developing written and performance tests and survey instruments, and determining reliability and validity of education instruments
- **instructional product development:** study of the techniques appropriate for developing training materials, including identifying learner characteristics, specifying objectives, applying training strategy, validating training materials, and evaluating training
- **computers in education and training:** study of the application of computers in education and training, including selecting appropriate computer software

While the role of instructional designer may be operationally defined by the standards of the 1750 series, the specific duties performed by instructional designers will likely vary depending on the goals or mission of the organization. Parker (2020, 2021) found that instructional designers in the U.S. Army were filling roles as administrators, managers, data entry specialists, and instructors (1712 job series) which, while benefiting from the requisite 1750 skill sets, do not require routine performance of specified 1750 job tasks and competencies.

Benefits and Challenges of Working in the Government and Military

Instructional design jobs in the U.S. government are highly sought after by many individuals. In this section, we will review some of the benefits and challenges that come with full-time government instructional design positions.

Benefits

Benefit 1: Impact a public mission. By working as an instructional designer for the U.S. government and military, you have an opportunity to benefit the citizens and/or service members of the United States of America. This could include developing training that helps to upskill employees of a government agency and/or the military, or it might be to develop educational content to support a mission. By working for the government or military, you can know that the work that you are doing can contribute to those who serve our country.

Benefit 2: Job stability. Unless your job has a specific contract term associated with it, careers with the government and military can be incredibly stable. It is rare that full-time positions are eliminated, and because of due-process rules, it can be difficult to fire a federal employee. This means that once you get your foot in the door with government employment, you can count on having a fairly predictable career.

Benefit 3: Opportunities for development. As a government employee, you become part of a network of other federal agencies and military organizations. This may present you with opportunities to connect across agencies. You may find that your organization will sponsor professional development workshops, classes, or even offer tuition assistance programs to help employees gain additional education. Depending upon your organization, you might also find that funding for conferences or specialized external training is more available. Another benefit is that over time, you may have opportunities to transfer to other agencies within the federal government. In most cases, your benefits, tenure, and pension will stay the same.

Benefit 4: Compensation and benefits. While compensation varies across various instructional design roles and organizations in the government, it is very competitive when compared to similar roles in higher education and corporate learning. According to our analysis of FedScope data from September 2022 (obtained from the [Office of Personel Management](#) (n.d)), the average salary for an Instructional Systems Specialist in the U.S. government is $102,818. On the other hand, according to a survey, the average instructional design salary in the United States is $81,685 across all industries, while across higher education it is $62,068 (Peck, 2023). U.S. government positions also come with benefits such as a pension and health care with generally low deductibles.

Benefit 5: No need for profit. There is rarely a need to show a profit in federal instructional design jobs. You need to show that you are using a budget wisely and effectively and must be able to articulate needs. Profit building is not normally part of a government job.

Challenges

While federal employment comes with a good set of benefits, it also comes with its challenges that individuals should consider before seeking a role:

Challenge 1: Lack of agility. There is a stereotype about federal employment being part of a bureaucratic process, and it is partially true. Because the federal government is so large, it can have a set of processes in place that prevent it from making quick decisions. You will find this particularly true in the hiring process, which can take many months. Software procurement can also be difficult because of the many existing regulations that govern purchases and information technology. While the government and military are making strides in becoming more innovative and agile, there is still a long way to go.

Challenge 2: IT systems. If you meet a government or military professional, they will undoubtedly talk to you about challenges related to information technology infrastructure. This exists for a couple of reasons: First, because the secure nature of government information, special hardware, software, and internet connections require more in-depth vetting. Second, because of requirements on government purchasing and contracts, it can be difficult to secure commercially available software that meet the requirements for government/military use; this results in using software or hardware that can be less than optimal for doing a job.

Challenge 3: Instructional design awareness. One significant challenge to working as an instructional designer within the government or military sector is the unfamiliarity of what an instructional designer is and/or does. More often than not, instructional designers are employed interchangeably with those in other education-oriented positions that do not require the same academic background or carry the same knowledge and skills sets of the instructional designer. Military training organizations, in general, approach training development, design, and delivery from a militaristic perspective rather than an educational one, and therefore often overlook the theoretical, analytical, and design advantages that talented instructional designers can provide to both training and non-training interventions and solutions. It often becomes incumbent upon the persons within instructional design positions to educate the populace on what their profession is capable of doing, and what value it may be to the organization as a whole.

Finding a Job

Civilian vs. Contractor Roles

Before discussing ways to find an instructional design role working for the U.S. government, we should outline the difference between civilian jobs and U.S. government contractor jobs. A contractor is someone who works directly with the government, usually through a company, on a contract basis. Contractors may have job titles and/or job duties similar to full-time government employees; however, there are key differences that should be noted:

- Contractors cannot perform "inherently governmental functions," meaning that they are often limited in the scope of the work that they may perform (such as decision making on government projects).
- Many contractors, even at not-for-profits, must show profit or earnings. This impacts what can be done and who can do it. In many cases, the person doing the work is the lowest cost person (they can find to maximize profit) to do that work.
- Some contractors have positions that are matrixed, meaning they may work on multiple different contracts and projects at the same time. Projects will differ depending upon the contract that is awarded—some may be short term.
- Some contracting environments are less stable because once the contract ends, the position and person may no longer be needed and let go by the contracting company. Also, contractors report to the contracting officer who can remove contractors quite quickly for poor performance compared to their civilian government employee counterparts.
- It is important to recognize that contractors need to market and sell, so they may use examples of government work to do that marketing and selling. Because of this, it is important to review contract details before the response to a request for proposal is released and within the contractor's response to proposal.

It is typically said that contractor jobs pay more, and the positions are easier to get; however, they provide less than adequate job security. By contrast, it is often argued that government jobs have more security and stability, can have better benefits, and provide a truer sense of "serving one's country."

Searching for Civilian Roles

As of when this chapter was written, USAjobs.gov is the primary website for finding civilian jobs for the U.S. government. Occasionally, you may find some government organizations that hire outside of USAjobs, but that is an exception. When looking for

Instructional Systems Specialist positions on USAjobs, you will produce the best search results if you enter the term "1750" or "Instructional Systems Specialist" into the search bar.

When performing your search, please note that some jobs have certain candidate requirements, meaning that the role is only open to certain individuals (e.g., those who are internal to the agency, those who already work for the federal government, or those who are associated with the military). That means that you may not be able to apply to some of the listed jobs. If you are not a current federal employee, you will likely want to set your search filters to "Public," as these are the job postings that anyone can apply to.

You should also note that U.S. government jobs are typically classified using the General Schedule (GS) system. GS levels are a means of setting a standard pay scale amongst federal employees and are classified according the "level of difficulty, responsibilities, and qualifications required" (Office of Personnel Management, 2023). There are 15 grades within the GS system. The grade is associated with the level of expected experience and expertise required for successful job performance. Grades 1-6 are considered novices. Grades 7-9 are considered interns. Grades 10-12 are considered journeyman. Grades 13-15 are considered experts and are often in managerial, supervisory, or advisory roles. As an example, an individual accepting a new instructional design position, with some experience, expected to perform work responsibilities with minimal oversight would have a job series and GS pay grade identifier as: General Schedule – Job Series – Pay Grade or GS-1750-12. The most common 1750 GS Levels, along with median salary and years of government experience, from the September 2022 Fedscope data set are displayed in Table 1.

GS Level	# of individuals	% of individuals	Median Salary
11	391	16.8	$75,041
12	760	32.7	$90,868
13	521	22.4	$113,246
14	132	5.7	$138,159

Table 1. Number of Individuals, Salaries, and Experience in Instructional Systems (1750) Roles as of September 2022

USAJobs has a variety of filters that you can apply when reviewing position openings—consider these as you search for an appropriate job. These filters include location, job level (typically GS level), and supervisory status. There is also an option to find jobs that are completely remote; however, these are rare and very competitive. It is important to note is that jobs for the U.S. government are only open to naturalized citizens of the United States.

Applying for a Position

Once you find a role that you are interested in and qualified for, apply. However, be aware of a few things in this process: (a) the application process may be opaque—meaning that it may be difficult to know your job status at any time, and (b) the timeline for hiring in federal roles can be quite long.

Regarding opaqueness, even though USAjobs has an application tracking process (e.g. Reviewing applications, interviewing, job offer)—it is up to the individual agency to update application status, often resulting in inaccurate information. Additionally, if you are not selected for an interview or for an offer for a position, you will likely not get feedback regarding why you were not selected. Thus, if you are interested in federal civilian employment, it is probably a good idea to apply to many jobs.

Another challenge in the hiring process is the timeline, as each step of the process takes time. Typically, applications are processed by the agency Civilian Personnel Office then reviewed by a hiring manager or committee. Even if you receive a job offer, you may find yourself waiting for several months for additional security clearances before you can begin working in that role. Therefore, if you are interested in a U.S. government instructional design position, make sure that you have time, and patience!

Education and Training Formats and Technologies

Education vs. Training

When working for the U.S. government, you may notice a difference between instructional design roles involved in education vs. those involved in training. Operationally, we will define education as the process of imparting knowledge, general skills, strategies, philosophies, reasoning, and judgment. Training is the act of gaining a particular skill set. Training prepares a person for the present job, whereas education prepares a person for their future job and upcoming challenges.

In many ways, the divide between education and training in the U.S. government can be perceivably similar to the difference between higher education and corporate instructional design. In higher education, instructional designers work on developing longer form courses that are usually focused on developing knowledge and softer skills. Corporate IDs, on the other hand, work on training needs that will have an immediate impact on current performance. As with any dichotomy, there is bound to be overlap, but this is generally a helpful distinction in considering the type of work that you may do as part of your role.

If you are thinking about working for the federal government as an instructional designer but want to be in academia, the federal government has many universities that use instructional designers. Most prominently, this includes the colleges and universities associated with each branch of the military, including:

- **Army:** Army War College (Carlisle, PA), Army Command and Staff College (Leavenworth, KS), U.S. Military Academy (West Point, NY)
- **Navy:** Naval War College (Newport, RI), College of Naval Command and Staff (Newport, RI), U.S. Naval Academy (Annapolis, MD), Naval Postgraduate School (Monterey, CA)
- **Air Force:** Air University (Montgomery, AL), Air Force Academy (Colorado Springs, CO)
- **Marine Corps:** Marine Corps University (Quantico, VA)
- **Joint Forces:** National Defense University (Washington, DC)

For those who have an interest and background in K-12 education, the Department of Defense also operates elementary and secondary school systems—The Department of Defense Education Activity (DODEA)—offering opportunities to live abroad while supporting military installations around the world. Additionally, the Bureau of Indian Affairs within the Department of Interior also operates a sizable school system serving Native Americans.

Education and Training Technologies

Regardless of where a position falls on the education and training spectrum, instructional designers in the U.S. government may find themselves creating training and educational opportunities in a variety of formats, depending on the mission of the agency. These might be structured as:

- courses (both long and short)
- computer-based training
- simulations (VR, AR, choice-based)
- videos/animations
- documents (job aids, handbooks, lesson plans)

As such, the learning technology used in an instructional design position could vary widely depending on the needs and resources of your agency. Some positions may require you to know about how to build courses in a learning management system (e.g. Canvas), while other positions may require you to understand how to create content with an eLearning authoring tool (such as Adobe Captivate or Articulate Storyline). Additionally, you may find that some agencies are adopting technology standards such as SCORM and xAPI. Having a preliminary knowledge of these standards may be helpful to your position.

Also, as an instructional designer, you could be asked to provide comprehensive reviews of educational products. These reviews are normally part of a systematic approach to assessment or evaluation. Finally, an instructional designer can also be a key member of leadership to help support the education and training mission as well as strategic planning.

Figure 2. Military Members Participating in Virtual Training Exercise

Higher Education Degrees for Instructional Design

If you are considering gaining more competence in the 1750 job series and are looking at masters or doctoral programs, consider ones that focus on learning different instructional design paradigms. Webster's Dictionary defines a paradigm as "a philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalizations and the experiments performed in support of them are formulated" (Merriam-Webster, 2023). Paradigms provide a guiding theory, formal patterns, and methods to work within instructional design and curriculum development. Assumptions about learning may be different across different paradigms, but there are also similarities. Understanding the role of Instructional Design paradigms (such as Dick and Cary, Diamond, backwards design, Merrill's principles of instruction, and Gagne's nine events) can help instructional designers better understand the guiding philosophies of the work being undertaken in government environments.

Analysis, design, development, implementation, and evaluation—commonly known as ADDIE—is not a paradigm, but rather a process and can trace its early history back to the 1950s in the U.S. Army—however, it was not until the 1970s that the process became more commonplace. ADDIE was developed to be a guideline to create effective training for educational materials. While used less today, it is still a prominent process used by many in the creation of educational materials.

An educational program that concentrates on one paradigm does not provide the broad background an instructional designer may need to complete government work. Here are some additional general tips for selecting a program:

- Search for programs that specifically develop your theoretical knowledge of instructional design, curriculum, and evaluation principles. Developing these areas will provide a strong framework for educational decision making.
- Look at programs that are beyond project-based outcomes and also challenge your knowledge or research, data analysis, visual design, writing, and technical skills. You may want to look for programs that have technical skills that are needed within the government like interoperability (xAPI, SCORM) and accessibility standards.
- Ensure that any program you look at has multiple courses in evaluation and assessment. It can also never hurt to look for programs that teach multiple research methods.
- Do some background research on those who teach the courses to help you decide if this is the type of faculty you want to engage with on your educational journey.

Overall, when selecting a program, it is important to ensure that the program has courses that will cover the required 24 credit hours in the areas outlined in the first section of this chapter.

Research and Professional Development in Government and Military

Despite training and education being a part of the U.S. Government and Military for decades, there is a surprising paucity of literature examining the impact of LIDT. As such, the government needs professionals who are passionate about implementing evidence-based practices into their work and who want to then share their research with the rest of the community.

In the remainder of this section, we will explore journals and conferences that are good venues to explore issues related to instructional design and technology in the government and military.

Journals

Occasionally, individuals from the federal government will publish their research findings in peer-reviewed journals that are recognized by others in the instructional design field. These journals include:

- *American Journal of Distance Education*
- *TechTrends*
- *Distance Education*
- *Educational Technology Research and Development (ETR&D)*
- *Educational Technology Review (ETR)*
- *EDUCAUSE Quarterly*
- *AERA Open*
- *American Educational Research Journal*
- *Educational Evaluation and Policy Analysis*
- *Educational Researcher*
- *The Journal of Higher Education*

Additionally, education-focused journals in specific specialties can also provide a source for publishing. For example, if you work in an agency associated with health care, consider *Academic Medicine* or *Medical Science Educator*. If you work in military education, consider *The Journal of Military Learning*.

Organizations and Conferences

As a government instructional designer, you will have opportunities to be connected to the many professional development organizations related to instructional design and technology. These organizations allow you to stay connected to the developments in training and education in higher education and corporate environments:

- The Association for Educational Communications and Technology (AECT)
- The American Educational Research Association (AERA)
- The Online Learning Consortium (OLC)
- The Association for Talent Development (ATD)
- The eLearning Guild
- The IEEE Industry Consortium on Learning Engineering (ICICLE)

In addition to these general organizations, there are also professional opportunities and organizations that connect individuals who are developing training and education for government and military audiences. These include:

- Advanced Distributed Learning (ADL)
- Federal Government Distance Learning Association (FGDLA)
- Military Scholarship of Teaching and Learning (MSOTL) Conference
- Air Force Learning Professional's Group
- Association for Talent Development (ATD) Government Workforce Conference

Overall, the U.S. government would benefit from employees who want to engage with the internal and external instructional design community to share evidence-based practices. Doing so will increase the impact we can have on our public mission.

Conclusion

Being an instructional designer in the federal government can be a rewarding career that offers many benefits, including job security, good pay, and an opportunity to serve the public good. Additionally, because of the diversity of agencies within the government, that means that there are opportunities that align with your interests and abilities. We hope that you will consider ways that you might use your talents to further the education and training mission of the U.S. government and military.

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Careers in Corporate Learning & Development

Seth-Aaron Martinez & Eunjae Kim

Instructional Design   Careers   Graduate Students

In this chapter we first define what a learning and development (L&D) role consists of. We then discuss the keys to secure a competitive L&D role in the corporate space. The second section is dedicated to several critical elements for achieving success once you have landed a corporate role. To illustrate each principle, throughout the chapter the authors incorporate examples from our professional experience.

Defining a Corporate L&D Role

To be clear, the corporate environment is fast-paced and competitive. Therefore, the purpose of all corporate L&D roles is to improve performance. The rationale is that if the individuals and teams within a corporation perform at a top level, then the likelihood is higher that the corporation will perform at a top level as well. So—whether it is to onboard new employees, train the organization's leaders, upskill the software engineers, or anything else—the ultimate goal of the L&D role is the same: to improve the performance of the individuals and teams that constitute the organization.

Next, the job titles we have most frequently encountered in the corporate space include, but are not limited to, the following: instructional designer; learning experience designer; learning technologist; learning measurement and/or analytics; learning consultant; and learning strategist. While we discuss corporate L&D roles further in the sections that follow, the key here is that the L&D job titles and responsibilities of the corporate space are not much different than those of the nonprofit space. In our experience, what is different is the number of positions available and, typically, the depth of the expertise; that is, corporations can usually afford to hire for more roles and with greater experience/education/expertise for those roles.

Securing a Corporate L&D Role

Formal Education

In order to land a competitive L&D role, it is necessary to first acquire the relevant skills. In terms of formal training, is a graduate degree necessary if you want a high-caliber L&D role? Could a professional certificate suffice, or even necessary to begin with? Well, there are both advantages and disadvantages to each of the various altitudes of formal training and education one might pursue. Taking the position that you want to land a competitive (or highly competitive) L&D role, let us first consider formal education.

Yes, it is true that a person can secure an L&D role without formal education. However, if you want a competitive role with, say, a Fortune 300 company or better, we firmly maintain that a graduate degree in an L&D-related field is necessary. Potential fields might include, but are not limited to, programs such as: instructional design (ID), learning

experience design (LXD); learning science; educational technology; user experience (UX); and potentially even some of the visual design fields. While the specific degree is often less important, having a master's degree in any of these fields would greatly increase your chances at securing a competitive L&D role. As authors, in our time employed at Google, Adobe, Confluent, and Facebook (Meta), everyone on our teams and organizations possessed at least a master's degree. The pattern is clear: companies choose to distinguish the top candidates by virtue of a graduate degree in-hand. Because there are many resources at stake from the company's point of view, they will use every means necessary to separate top candidates from the rest—and formal education is often the first factor.

The immediate next question becomes, "If a graduate degree is so important, why is the discipline chosen less important?" It is vital to understand that many, if not most, L&D roles are interdisciplinary to begin with. For example, using Table 1 below, let us look at the roles of *instructional designer* (ID) or *learning experience designer* (LXD) as examples (in industry, the labels *ID* and *LXD* are often used interchangeably). The skills to be an ID/LXD require mastery of principles of learning and motivation, which stem from the fields of neuroscience and cognitive psychology. ID/LXD roles also require training in the theories of instruction and andragogy (for an adult audience) or pedagogy (for youth) to know which instructional techniques are best suited to the audience they are designing for, in which contexts, etc. A competent ID/LXD should also be adept at needs assessment and evaluation. Lastly, IDs/LXDs should be familiar with several technological tools and know when, where, and how to best apply them in order to succeed. Please note that these skills outlined above are simply *the basics* for an ID/LXD role. In this example, you can see that there are multiple disciplines at play. This is precisely why it is less important to have any one degree in particular—because it is possible to acquire the necessary skills for an L&D role from multiple academic backgrounds. From just our experience alone, we have been teammates with individuals with backgrounds ranging from ISD, educational technology, business (MBA), psychology, and graphic design (MFA, who later took courses in the learning sciences). And yes, at Meta (Facebook), numerous members of our L&D organization possessed a PhD.

Role	General Job Duties	KSAs Required
ID/LXD	- Assess learning needs - Conduct end user research - Partner with SMEs - Design instructional material & experiences	- Learning science, performance improvement, user research techniques - ID, LXD, UX processes - Visual design
Learning Technologist	- Support delivery of learning solutions through technology (e.g., LMS) - Assist in creation and maintenance of learning objects - Troubleshoot technology issues	- Mastery of LMS - Data-informed decision making - Working knowledge of HTML (or another coding language common to LMS)
Learning Analytics & Measurement	- Evaluate impact of learning interventions - Measure performance outcomes	- Quantitative research techniques - Evaluation

Learning Consultant	• Provide consultation services within the business • Offer recommendations for potential learning solutions, and how potential partnerships might best come to be • Conduct needs analysis	• Strong familiarity with all other L&D functions • Partner with other parts of the business • Evaluate vendors • Typically more senior in experience level
Learning Strategist	• Synthesize scholarly research and industry data into actionable best-practices for team/org • Set forth the ideal state (i.e., the strategy) for the team/org	• Ability to search, review, and synthesize relevant scholarly literature and industry data • Ability to write well • Typically more senior in experience level
Operations	• Assist in the execution of plans	• Budgeting, project management, scheduling, communications • (Note that the KSAs for Operations roles are not specific to L&D)

Table 1. Description of Knowledge/Skill/Ability (KSAs) Required for Common Corporate L&D Roles
Note. These descriptions are both general and typical; actual skills required will vary from role to role and company to company.

Professional Certification

Building off the notion that possessing a graduate degree puts you in the most competitive position but that the field itself is less essential, we must now discuss how a person with a background in graphic design or psychology or business might land an L&D role; this brings us to professional certification (see Table 2 below).

For individuals who have a background in a discipline that is not traditionally L&D, a professional certificate can make a transition to L&D more possible. This includes individuals looking to land a corporate role at a different company, or individuals looking to stay at their current employer but are presently in another (non-L&D) part of the business. Regardless, in the absence of a graduate degree altogether, a professional certificate is the next best thing. Certificates are not as robust as graduate degrees, but nor do they take as long to complete. Again, companies want the most expertise they can find, so while it may not rise to the level of a graduate degree, a professional certificate nonetheless reflects a certain altitude of technical training.

University Certificates	Non-University Certificates
Boise State University*	Digital Learning Institute*
Florida State University	Coursera* (University of Illinois)
Harvard University	LinkedIn Learning*

[Indiana University](#)*	[NovoEd](#)*
[San Diego State University](#)	[OpenLearning](#)*
[University of Georgia](#)	[Udemy1](#)*
[University of Washington](#)*	[Udemy2](#)*

*Available online

Table 2. *Potential professional certificates available.*

Interpersonal Skills

Beyond the technical skills required for the duties of a given role, your interpersonal skills are just as important. An adage that has served us well is, "*The technical skills get you the first-round interview, but the people skills help get you the job.*" The reason for this is that so much of every L&D role demands the ability to work with members of other teams, often individuals for whom there is no obvious connection. For example, on any given project you may need to support the legal department, the finance team, or the software engineers. Because of this reality, it is vital that a person be able to communicate effectively to advance projects—to truly partner with others. Further, projects often require dealing with subject matter that is completely foreign to you. You may also need to report to individuals who are the VPs of their division. Ideally, these people and teams in different parts of the business with different altitudes in seniority will all want to work with you. Another inescapable fact is that corporate L&D roles often demand that the person do a small amount of evangelizing while working with different parts of the business in order to help them understand exactly how, when, and why L&D teams operate, and that too requires savvy interpersonal skills. In summary, success in a corporate L&D role can only be achieved through consistently clear communication and positive interpersonal interactions across the business. And recruiters absolutely know this and look for this when screening.

Experience

Assuming a person's educational background rises to the level of a competitive applicant, the next most significant attribute is that of one's professional experience. Corporate recruiters look at two aspects of potential candidates when trying to fill an open position: depth and breadth. Having a deep focus or concentration that you have mastered is a smart way to approach starting in a corporate role. That is, if you want to land a corporate role but are not coming from one currently, the next best thing you can offer is an L&D specialty. The recruiter can see your specialty or mastery and reasonably conclude that the leap to corporate would be less severe for you when trying to fill a role of a similar specialty.

For breadth, we suggest pursuing a variety of professional experiences and project types. The fact is that the greater the variety of one's professional experiences, the greater the potential opportunities that he or she might realistically entertain. So, regardless of you being already in your first corporate role or hoping to land your first, it is important that you seek a variety of opportunities. For example, if you are hired for an onboarding role, you could still support a leadership program (like new manager training) in a secondary fashion. Or, if your current position is related to DEI, you could still assist with the individual contributor population. Over time, the greater breadth will allow you to be a more well-rounded employee in the present, as you will have more experiences to draw upon for your current work. Simultaneously, the variety will position you well for increased consideration of opportunities elsewhere. So, it becomes a win-win situation—the greater the depth and breadth, the more competitive you will be.

But if you are early in your career, how do you best decide between *specialization versus variety* of experiences? It is here that we should address the elephant in the room: the variable of the economy. The reality we must accept is that when the economy is not strong, L&D is often one of the first teams to go in corporate environments (Bennington & Laffoley, 2012; Reinheimer, 2010). A down economy favors those with a broad skill set (e.g., 'jack-of-all-trades'). This is because while companies tighten their budgets, they rely on individuals who possess a variety of skills—employees who

can wear multiple hats. We each saw this during the highly uncertain COVID pandemic. On the other hand, a strong economy benefits individuals with specialization because companies can afford to pay for the numerous narrow specialties. This is something that was quite evident to us prior to the pandemic.

Given the realities of how companies approach L&D teams during strong/weak economies, let us shift our focus to the trade-offs for specializing. To be clear, you will never go wrong pursuing specialization—the world rewards expertise. In fact, focused expertise is always the first thing sought after by companies. For example, if you are interested in an L&D role at an accounting firm, it would be extremely helpful to know how learning sticks best in accounting, financial, or highly computational situations. But then how and when should I approach variety in professional experiences? This becomes the key trade-off for specializing. If you want to devote significant time (e.g., years) to a specialized focus, it will likely come at the cost of adding variety, and that is your call to make. Conversely, if you opt to add a variety of experiences to your resume like we have discussed, there are certainly benefits to that—but it comes at the cost of deep specialization. In our experience, only you can make that call based on your professional priorities. The key is to know that these trade-offs are real.

Your Digital Footprint

In 2023, we cannot overstate the importance of having a digital footprint as a professional. A digital footprint is essential and serves multiple purposes. First, we strongly recommend using a digital *portfolio* to showcase your expertise, skills, and accomplishments in a vivid and dynamic manner. For instance, take a look at the portfolios of [Shirleen Wong](), [AmandaLXD](), and [Cath Ellis](). Or, take a look at this [article]() on portfolio creation by instructional designer Devlin Peck. Employers do not want to guess; they want to see what you are capable of. We suggest highlighting a variety of instructional products and projects, if possible: e-learning courses, instructor-led training, or even full learning experiences. If capturing a particular product or element of yours is difficult because of intellectual property issues, consider using screenshots and vignettes to illustrate your work. The more variety in your portfolio, the more illustrative, the better.

Second, consider sharing your key learnings and insights as a student or early career professional in written form, like a blog or longer-from article. Examples include blogs on your personal website (e.g. [Dr. Luke Hobson]()) or on a content provider for long-form prose, like Medium.com (e.g. *[Teacher to Instructional Designer]()*; *[What Does AI Mean to Us As Instructional Designers?]()*). In terms of longer-form writing, we should note here that for a corporate L&D role academic publication is not nearly as valued as good, illustrative, samples of work and/or a blog post that receives high traffic.

Next, leveraging social media serves to only increase your exposure and potential opportunities. LinkedIn is a must. Most companies employ full-time recruiters dedicated to filling open roles, and they use LinkedIn as their primary source of finding strong candidates. Ideally, you will link each of the elements described above to one another forming an interconnected web, thereby establishing a strong digital footprint for yourself.

Interviewing

Your goals for L&D interviews are to articulate (a) your technical and social competence and (b) the impact you have had as a result of your technical and social competence in both your current and past roles. When it comes to the interviewing process, do your homework. Your ability to perform well on the "test" is made much easier when you have prepared and are familiar with what is coming on the test. Understand that the initial interview is typically to screen the candidates, often conducted by the recruiter themself. The screening interview is often general and basic in nature, typically asking questions from a script. The subsequent interviews, however, are usually conducted by the hiring manager and other members of the hiring team and will be more sophisticated and precise in each successive round.

In preparation for an interview, we suggest speaking to any friend or ex-colleague that may currently work at the hiring company. Ask them what their hiring process was like, what they know about the L&D team that is hiring, the manager that is hiring, and the nature of the role from what they can see internally. We suggest combining that information with a review of the LinkedIn profile of the hiring manager and team. *Wait, we should LinkedIn stalk them*? Yes, 100%! There is no reason why you cannot be the most informed candidate they interview. If anything, that should be your goal.

As you investigate the role, be mindful of the question that always comes at the end of every corporate interview: "Do you have any questions for us?" Your ability to form a small number of thoughtful questions during the homework phase is another indication of your preparation and another chance to demonstrate how thorough you are. This type of recognizance is critical to succeeding in the interviews. In fact, we have been asked explicitly in our interviews, "How did you prepare for this interview?" Well, you absolutely want to be able to reply that you pursued knowledge of the role to the utmost degree. It is your chance to brag about your diligence leading up to the interview. Ultimately, they will be impressed by that.

Negotiation

As you are advancing into the latter phase of the interview process, we do believe you should have a compensation target in mind. Then, when you are extended an offer for a corporate L&D role, you will be ready to negotiate. And for successful negotiation, again, do your homework.

Like our suggestions when interviewing, successful negotiation comes only as a result of strong recognizance work. Consider asking your contacts inside the company for any information they may be privy to, like, "How did you approach negotiation at that company?" "What insights might you have?" "What makes up that company's compensation package —is it just salary?" "Or perhaps does it also include stock options, a signing bonus, and work-from-home flexibility?" We also definitely recommend looking up the salary landscape on Glassdoor.com. The more information you can glean, the better.

At the most tactical level, with the offer now in-hand, we suggest that you always express gratitude and humility immediately in response, but that you also always counter their offer (just do not say that countering is what you are planning to do). It is very appropriate to ask for a day or two to mull it over. If the offer comes towards the end of the week, then consider asking to "take the weekend to digest it." At this stage, they have made you the offer because they like you the most. Therefore, the ball is completely in your court.

When considering the counter, we suggest you simply weigh the current offer against *what is most important to you*. Please note, however, that you typically should not ask for an increase in everything—we consider that a rookie move. Instead, decide what the one to two parts of the compensation package you care about the most are and go after those. For example, one of the authors had a salary target in mind when the offer came in for a role at Facebook (Meta). In the author's own words:

> I had already earned a fair amount of stock over several years at my current employer and was more interested in liquid cash. Specifically, I wanted $20k more per year than what Facebook was offering. So, I immediately told the recruiter who had shared the offer, "Wow, thank you, I am humbled by the offer. . . can I sleep on it and can we talk tomorrow morning?" The next morning, we had the pre-arranged follow-up call. I told her, "Again, thank you so much. The offer is very flattering, and I deeply want to join Facebook. But there is one thing that is eating at me and keeping me from diving in and accepting the offer full-steam ahead, and I'd like to share my thinking," which she eagerly wanted to hear. "I told myself that I wouldn't leave (my current employer) unless I could make about $30k more per year than I am currently making, and this falls short of that. Plus, in a couple months I have another annual batch of stock hitting at my current employer," which was completely true. "So, my thought is this: could you increase the base salary at least $20k, or increase the stock shares to reach $10–15k more per year? I am fine with either one. If one of those was reached, I would accept the offer immediately and submit my two-week notice today." After she discussed this with the finance department and traded phone calls with me for several hours, she finally called back and said, "Okay, here is what we can do: how about we give you a $30k signing bonus to cover for the annual stock that you will miss from your current employer?" Which I gladly accepted.

Succeeding in a Corporate Role

Navigating the Corporate Space

Getting a new L&D job is exciting, but what now? What are the things that will make you successful in that job? While L&D is an essential part of any organization, it is important to consider how the role and team fit into the broader context of the company, especially when seeking critical buy-in from leaders. And, like all parts of an organization, L&D teams need to show these leaders the value it adds back to the business. So, how can you achieve this when you have just started in your role? In this next section, we break down the key considerations when starting in a corporate L&D role and discuss some practical steps that we have witnessed lead to success.

Balancing Learning vs Performance

The first question to answer is, *"What does your business and/or leader care about and why?"* In other words, you need to quickly build a strong understanding of the key priorities of the business and its leaders, especially your leaders. The corporate environment is typically fast-paced, demanding, and results-driven with a high focus on meeting deadlines and achieving business goals. Therefore, in this context it is less important to drive learning objectives and learning goals, per se (yes, we realize how that sounds). But trust us, your aim instead is to continuously improve the performance and productivity of the business, which will get the attention of leaders. We recommend drafting and aligning your L&D initiatives such that your L&D efforts will accomplish just that. In short, business goals drive everything. Figure 1 below helps illustrate the hierarchy of your corporate L&D priority:

Figure 1. Priority of the Corporate L&D Role

To achieve this, it is necessary to practice two very important skills in the corporate space: (a) develop a deep understanding of both business and learner needs, and (b) balance these needs to achieve the best possible outcome for the business. You will find that success means ultimately becoming a "translator" between the business and learners, and that you will draw from your expertise in both. You will often switch back and forth, looking for business solutions while also supporting the growth and development of learners.

Understanding Key Drivers of the Corporate Space

Next, we suggest developing a deep understanding of the top three factors that drive the corporate space: time, cost, and quality. There is often a trade-off between time, cost, and quality due to the fast-paced nature of the corporate environment. The L&D professional must be able to quickly assess the trade-offs between these factors and make decisions on optimal approaches to design learning solutions. That is, the simple fact exists that we cannot have all three simultaneously—a high-quality solution that is produced very fast and at very little cost. So as the professional, you must decide (or help decision-makers decide) which of the three you are most willing to stomach not having. In our experience, we have found that usually speed is the most important factor for the business, thus making it a decision between reducing either the quality or the cost of delivery. And that decision is one only you can make given all the factors at play. In our experience, sometimes it is the quality that must be cut short, which might be painful if you are a perfectionist. At other times, you are able to afford for the business to pay more money to get higher quality. In the end, it really comes down to your priorities as they marry with the business priorities and constraints.

Individualized vs. Scaled

With that in mind, often over the course of a corporate role your team must decide between an individualized versus scaled learning solution. When designing a learning solution, you may have to choose between a highly customized solution that is more costly and takes longer to develop versus a more scalable solution that can be developed quickly and at a lower cost. While an individualized solution can be more effective, it is often necessary to scale solutions to reach a larger audience. When deciding, you must weigh the benefits and drawbacks of each approach, then select the solution that will make the most impact across the needs of both the business and the learners.

Buy vs. Build

The same is also true when deciding between buying a solution or building it internally—a dilemma that arises frequently in corporate roles. In this situation, again you must consider the trade-off between the cost, time, *and* quality required to buy a solution externally or build one internally. For instance, if a solution requires a specific type of medium (i.e., eLearning with iPads) and you do not have the capabilities in-house to develop this in an efficient amount of time, can you afford to bring in a contractor or vendor to help get the job done? While quality would be high, cost vs. time is definitely a trade-off that will need to be considered.

Can vs. Should

Taking the previous section further, another decision that we believe is not addressed enough in corporate L&D roles is that of *can vs. should*. That is, just because your team can buy or build something does not mean you necessarily *should*. For example, in a corporate setting, there are often more resources available than in other contexts, so throwing money at problems can be the default mentality. Or, when trying to innovate, adding a feature to a learning experience for the sake of novelty (without any thought of the learning science principles at play) is not a smart approach to take: "Hey, what if we added a VR component to this and bought a few headsets for participants? We have several hundreds of dollars in the budget, let's try it. It will be cool." We have seen this type of logic repeatedly. Sadly, our experience teaches us that throwing more money at a problem is not necessarily the best solution. In fact, it seldom is. Rigor, thoughtfulness, and intentionality still reign supreme, especially so when the temptation is to spend more or add more simply because you can. Please remember, more is not always better.

Build Trust, Gain Influence

A simple fact exists within the corporate environment: building trust with whom those you work helps you gain influence. Especially in a corporate environment, influence is crucial for success for an L&D role as it allows you to more easily get the job done and achieve results. You can build influence specifically in two ways: (a) horizontally with other teams and peers, as well as (b) vertically with your leaders.

Horizontal Influence

Finding success while building horizontal influence heavily weighs on your ability to collaborate effectively with other teams, your peers, and other parts of the business. This is especially true if you are placed in new environments and/or industries. One of the unique aspects of being a L&D professional is the ability to be topic- and industry-fluid, working with different teams and in different areas of expertise. However, to thrive in areas where you may have limited knowledge or prior experience, it is essential to cultivate strong relationships with others who can provide support and guidance.

While building and maintaining strong relationships in the corporate space is a well-known factor for success, the importance of strong interpersonal skills and strategic relationships are underestimated. Interpersonal skills include communication skills, emotional intelligence, active listening, and empathy, all linked to building genuine trust and rapport with others. Use this to focus your attention on understanding motivations and perspectives of key people and teams, especially if you both can have direct impact on both side's initiatives and efforts.

Vertical Influence

It is also critical to ensure you are strategically building and gaining the trust of your senior leaders to [drive executive engagement](#) for your work. When it comes to building trust with executive leaders and senior stakeholders in the corporate environment, it is important to be well-prepared and methodical in your approach. This involves three key principles: (a) know all aspects of your project(s); (b) conduct the proper research to gather the necessary feedback and data; and (c) craft a strong plan or recommendation that is entirely based on that feedback and data (Martinez, 2020). Simply put, make sure you are seen as the trusted expert who has comprehensive knowledge and awareness of all aspects of a learning program (i.e., learning experience, feedback, etc.). Any questions leaders pose to you, you want to have an answer ready based on your research work. Then, we suggest basing your conclusions or plans on data, information, feedback, and experience to build a solid story. By following these steps consistently, you can increase trust and, ultimately, your influence with the senior leaders you work with.

Continue to Invest in Yourself

Lastly, success is never final in the corporate environment. That is, for top L&D performers there is no real point of "arrival." A mindset of continual improvement is a healthy one that has served both of us extremely well. One invaluable way to put such a mindset to practice is by investing in yourself for personal, professional growth. We strongly suggest taking advantage of the increasingly standard practice of companies offering a *Professional Development Fund* for their employees (see D'Angelo, 2023; Comparably, 2022; Apple Newsroom, 2022). *Wait, once we are employed, we should look to study more?* After your initial period of acclimating to the role, team, and company, yes. That is exactly what we are suggesting.

The domains and topics that are particularly relevant to work on for corporate roles may vary by role, by company. But the skills that we have seen to be particularly useful, though not always taught in graduate school or in an L&D certificate program, include the following list depicted in Table 3 below.

Skill	Description
Interpersonal Communication	As stated above, effective communication is highly important. An individual can always improve in this area. Even CEOs receive coaching in this area.
Stakeholder Management	Closely connected to interpersonal communication above is stakeholder management. The ability to work with cross-functional partners (XFNs) and peers is where the rubber meets the road for a corporate L&D role. Top performers are always very strong at working

	with and managing XFNs and peers while collaborating on projects.
Project Management	Every L&D project requires the ability to carefully and tactfully manage its progress. The skill is one every L&D role must possess to succeed.
Data-Driven Storytelling	Data (i.e., accurate information) is the universal language that allows L&D professionals to communicate clearly with the non-L&D parts of the business.
Design Thinking	Innovation and thinking outside the box are a premium for many companies. In our experience, too few people have experience with the benefits of design thinking at companies.
Pilot Testing	The ability to prototype and to produce MVPs (minimum viable products) is also a skill itself. We recommend always testing a preliminary version of your work before a more fully-developed launch. Many sins can be prevented by simply deploying an early MVP.

Table 3. List of Relevant L&D Skills Often Not Taught in School

Additionally, we are firm believers of proactively seeking help from internal sources. This can include reaching out to someone you respect to be a mentor; a source of guidance at strategic times or situations in your time at the company. This may also include volunteering for additional work projects that serve as secondary tasks (often referred to as "stretch" projects). Similarly, we also believe in seeking help from external sources. These can be working with a professional coach, attending professional development classes or workshops (mentioned previously), or even doing pro-bono work outside of the job. Really, the opportunities are endless for seeking additional help and support, but the key is to be proactive. In the end, you are the one that controls your career.

Conclusion

The corporate environment is a unique context that brings with it unique requirements. It is only by understanding the uniqueness of the context and its requirements can a person navigate the L&D space that they seek. To that end, it is our belief and hope that by adhering to the principles shared in this chapter, you too will be able to land a corporate L&D role and ultimately find genuine success in that role.

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Careers in K-12 Design and Instructional Technology

Drew Polly & Kay Persichitte

As we continue to see increased student access to educational technologies and devices in K-12 school settings, we also see expectations that educational technology should be used more frequently as a tool to enhance teaching and learning (ISTE, 2018; EDUCAUSE, 2022). Getting and succeeding at a job in K-12 settings requires individuals to have experience with contemporary technologies, a desire to maintain their technology skills through continuous professional development, and a willingness to become leaders in the integration of educational technologies to improve both teaching and learning.

Individuals may hold jobs in primary/secondary education that include being teachers, instructional designers, school-based technology facilitators, and school or district-based technology leaders. These individuals may hold expertise in teaching, instructional design (e.g., learner assessment, media use, instructional strategies), distance learning, digital technologies, and leadership in K-12 settings. Recent trends in instructional design and technology require individuals to also have some understanding of the following: flexible or personalized learning, active or experiential learning pedagogies, bichronous (online/in-person) instruction (Martin et al., 2020), flipped classrooms, virtual learning, cognitive tutors, maker spaces, computational thinking, and mobile technologies. Teachers have an interest in these technologies, but often need support to effectively integrate them into their classroom (Polly et al., 2023).

In this chapter, we will explore how to get and succeed at a job in K-12 settings. We will discuss the skills, knowledge, and roles of school personnel related to the field of educational/instructional technology; suggestions for professional development; and finding support within a professional community of support. In discussing these careers, we will present ideas related to the K-12 system for primary/secondary education in the United States, specifically the skills, knowledge and preparation for these careers.

Roles in K-12 Settings

In today's school districts and schools, technology and instructional design skills are required of individuals with various roles. Some of these roles are very specialized and narrowly focused on technology-specific instructional design responsibilities, while others are more general with technology and instructional design being one of many aspects of their job.

Classroom Teacher

As a classroom teacher in a K-12 setting, most states in the United States require you to obtain a teaching license from an accredited teacher education program. While some states require you to obtain a teaching license prior to becoming a full-time teacher, recent shortages in applicants for teaching positions have led many states to create pathways for individuals to begin working as a full-time teacher while they are simultaneously earning their teaching license.

Teachers draw from instructional design and technology skills on a daily basis. Teachers, in many cases, are given a set of content standards that describe concepts that they must teach. In some settings, teachers are also given curricula or resources to use or modify. In other contexts, teachers are expected to examine their content standards, design learning

experiences, and then implement them with their students. Teachers in K-12 classroom settings have varied levels of support and different resources depending on their school or school district.

In terms of technology-specific responsibilities, many teachers in K-12 settings now have access to iPads, Chromebooks, or other Internet-connected devices. Some districts have also purchased specific personalized programs (e.g., ALEKS, iREADY, Dreambox) and require students to spend a specific amount of time with each program, each week. In other contexts, teachers have more autonomy to use devices, Internet-based programs, and other software. The International Society for Technology in Education published their most recent Standards for Students in 2018 (ISTE, 2018; https://www.iste.org/standards/iste-standards-for-students). These standards call for K-12 students to actively use technology in ways such as exploring and investigating concepts, creating artifacts that represent their learning, and developing information literacy skills. In these instances where teachers have access to technology and autonomy, they must leverage skills and knowledge related to instructional design to create effective experiences for their students.

Building-Level Technology Specialist/Facilitator

Building-level technology specialists work in schools to provide technological support to school personnel. Most of these jobs involve basic hardware, software, and connectivity support; this requires individuals to have the knowledge and skills to troubleshoot technology-based problems while being the first line of support. In some states and school districts, these jobs may also involve teaching students concepts ranging from how to use specific tools to media use, digital safety, and technological literacy.

Often, in elementary schools (typically Grades K–5), students typically spend 45–50 minutes every five or six days in a computer lab for dedicated technology time. In these cases, the building-level technology specialist serves as the technology teacher, working with students on technology-rich projects or other technology-based activities. In middle and secondary schools (typically Grades 6–12), the building-level technology specialist/facilitator helps classroom teachers by providing consultation about using various technologies to support teaching and learning. In all of these cases, opportunities for these building-level technology experts to work with teachers on the design of technology-rich instructional activities varies greatly; in some cases, these individuals are only expected to be well-versed in specific technologies. In other cases, they are expected to be experts in technology, instructional practices, and curriculum.

In the United States, individuals who work in this role typically hold, or are in the process of earning, their state's technology specialist endorsement. Earning this endorsement typically includes completing courses offered through a graduate certificate or by a Master's degree program. Some of these programs also require the successful completion of an internship in a school setting. Since these requirements differ in various states—in some cases, districts—those interested in this role should make inquiries about specific requirements for this role. Some districts offer part-time assignments that combine the role of technology facilitators and teachers.

Media Specialist

The contemporary media specialist (also known as the library media specialist) typically has a Master's degree either in the field of educational/instructional technology or in a post-baccalaureate program that emphasizes in technology integration, multimedia development, or school media. Some states require a special license or certificate for these positions and some allow a bachelor's degree with other specific coursework. Media specialists generally must document prior experience as a teacher or other educational professional in K-12 education. Since media specialists serve the entire school community, they must have good oral and written communication skills and should be able to form effective interpersonal relationships with students, staff, and parents.

Media specialists must have basic librarianship skills such as the ability to select and provide access to a wide variety of materials that meet the needs of various learning situations. They also must be able to successfully interact with both teachers and students to support teaching and learning related to literacy and the use of technology. The most common requirement is the knowledge and ability to both work with technology and assist with classroom technology integration. The Media specialist does not typically serve to fix or trouble-shoot a school's technology; however, smaller

or more rural schools may expect these services. In this era of mobile devices, media specialists may be called upon to develop policy statements regarding the use of:

- access to mobile devices,
- student computer use,
- digital privacy,
- internet safety,
- student or faculty access to and use of copyrighted materials,
- and/or other topics related to technology in schools.

Media specialists are usually hired on a faculty contract that includes tenure and some additional days of responsibility at the start and end of the school year. Success as a media specialist requires frequent professional updates related to emerging technologies and their potential for supporting or extending instruction. One such area that has grown significantly in the last decade is blended learning. As the flipped classroom model has become more popular, the expansion of student access to classroom materials and the teacher through a combination of online, face-to-face, and/or synchronous computer-mediated technology has proliferated. The media specialist may be the bridge to these innovative instructional environments for faculty and parents. Many states have a state-level professional organization where media specialists collaborate on a regular basis.

> ### Learn More About Blended Learning Practices
>
> To learn more about blended learning practices, read Graham et al.'s (2022) book titled [K-12 Blended Teaching: A Guide to Practice Within the Disciplines](#).

District-Level Technology Leader

Almost all districts now have at least one person who works as a leader in administrative technology. These leaders often possess expertise in technology integration and teaching and learning. Their graduate school coursework typically includes concepts in both of those areas. Often these graduate programs include individuals working in K-12 schools as well as individuals who are studying how to be technological leaders in business and industry as well. In their jobs, these district-level technology leaders carry responsibility for the development, implementation, and evaluation of district-level and sometimes school-level technology plans ([example](#)). These administrators are also responsible for managing budgets, purchases (e.g., comparing products, contractual agreements, user plans), installments, warranties, service and/or upgrade agreements, insurance coverage, and safety for all technology in the district. They may play a major role in the development of district-level policies related to technology and, at a minimum, have the administrative responsibility to monitor the fair and legal implementation of all such policies. They have supervisory responsibility that varies but often includes district "technicians": personnel who fulfill technology maintenance and installation roles not related to students or faculty. District technology leaders usually interact closely with the local school board, superintendent, other academic administrators (including principals), and sometimes the media specialists.

District technology leaders are typically hired on through "at will" administrative contracts that are year-round and may stipulate a timeline for review and renewal. They are often members of the Council of Chief State School Officers (CCSSO) (see http://ccsso.org/). The CCSSO offers regular workshops and professional development opportunities related to contemporary and emerging technology use and integration issues. These individuals have typically served as a school-based technology specialist before taking on this larger role.

State Technology Leader

State technology leaders are typically entrenched in the communities of both K-12 education and educational policy. Like district-level technology leaders, these individuals have to manage and work with budgets and contracts. They are also required to help to make sense of federal or state policies related to technology access or technology tools that influence the work of school districts and personnel in K-12 settings.

In many cases, these state technology leaders work closely with other state leaders from divisions within state departments of education. These divisions include curriculum and instruction, assessment and accountability, school performance, accreditation, and so forth. In the past decade, one of the larger issues has been the increase in administering high-stakes state assessments via the internet on laptops and desktops. In many cases, state assessment and accountability leaders must work with state departments of education to make these decisions and set policy and implementation guidelines. State technology leaders must also advise and consult with state department of education personnel and other state leaders to ensure that adequate connectivity and infrastructure are in place for high-stakes assessments to be administered online.

State technology leaders also have potential to influence and drive policy and initiatives that influence the entire state. For example, many states who have endorsed and implemented initiatives to turn classrooms into 1-to-1 technology-rich environments do so only through funding and political support driven by the state department of education and other state technology leaders. Another example is the growing demand for blended classroom options in K-12 settings which also relies on extensive Internet access, strong infrastructure, and student access to computer-based technologies outside the classroom. Most state technology leaders have served as district technology leaders prior to taking on this expanded role. They often rely on sharing ideas about new opportunities or state-wide initiatives with their colleagues in surrounding states.

Instructional or Curriculum Designer

As more companies develop technology-based programs and other educational materials for K-12 schools, there are job opportunities for individuals to serve as instructional designers to help design and develop these resources. Instructional designers are sometimes referred to as curriculum developers. These individuals typically have two distinct types of backgrounds. Some individuals enter this role from an instructional design background where they have taken graduate courses or have earned a graduate degree in instructional design. Other individuals come to this role with teaching experience and either a graduate degree in curriculum and instruction or in a specific content area (e.g., literacy education, mathematics education, etc.).

In this role, instructional or curriculum designers design or create the learning experiences that will be included in the programs and resources. Based on individuals' background knowledge, they serve as the designer or the subject matter expert (SME) to work on the development of resources. Instructional designers who do not have the background to serve as the SME typically plan instruction, develop technology-rich activities, and consult with the SME about iterations of the product. Individuals with the background to serve as the SME typically ensure that the content in the educational resource is effectively included.

In recent years, there has been an interest for curriculum and instructional designers to create products and resources that can be used in online contexts. These include technology-based educational programs and curricula that teachers can use in online settings with K-12 learners. As interest continues to grow in K-12 online learning as well as the use of the technology-based programs and products in K-12 schools, these roles will continue to be more prevalent.

Professional Learning Facilitator

Professional Learning (also known as professional development) facilitators and consultants support the integration of technology in K-12 settings by working directly with teachers, school-based technology specialists, media specialists, and district technology leaders (Avci et al, 2020). Professional development facilitators either work in this role full-time or serve primarily in another role while facilitating professional development as an additional or secondary

responsibility. These individuals are well-versed in working with district and state leaders to identify teachers' needs and design and implement learning experiences to support teachers' use of educational/instructional technologies.

Individuals in this role are usually members and state affiliates of the International Society for Technology in Education (ISTE). In some cases, these individuals are also members of Learning Forward (formerly known as the National Staff Development Council) which focuses on issues related to teacher professional development. For those interested in this work, a good starting point is to facilitate sessions at district, state, and national educational technology conferences. This initial work will give you experience in planning a short professional learning experience for teachers and allow you to work with teachers in a lower-risk environment. Partnering with other professional development facilitators may also provide opportunities to experience development and delivery of professional development workshops that extend or enhance introductory professional development activities.

Developing Your Professional Learning Network (PLN)

For those seeking jobs in K-12 settings, it is essential to establish ways to continue your learning through a professional learning network (PLN). The development of your PLN is recommended for a few reasons:

1. A well-rounded PLN should include teachers, educational technology leaders, and educational technology organizations. This increases the likelihood that you will stay abreast of technologies and innovations that are being used in K-12 classrooms.
2. Educational bloggers typically share links to recent blog posts through social media platforms such as Twitter or Facebook. It is more efficient to access longer blog posts through social media posts—that are curated to match your interests—than it is to subscribe to and/or read several blogs weekly.
3. Twitter chats continue to be a popular way of networking with individuals who work in K-12 contexts. These occur when an individual or organization hosts a Twitter chat by posting a series of questions to which others respond, creating an asynchronous, open conversation. Twitter chats are a great way to learn a lot of information about a topic, exchange a lot of ideas in a short period of time, and expand your PLN by engaging with others.
4. Networking leads to professional relationships. By being active and participating (reading, posting, and responding to others) through social media, you are forming a professional network that leads to professional relationships with others who share your interests and offer a variety of experiences and support.

As you think about your social media presence and the development of your PLN, we would be remiss not to mention the need to be cognizant of what you post on social media and how others may interpret posts on your accounts that are not related to education. One thing to consider is to keep a social media account for professional use, and a separate one for personal use. If you end up using the same social media accounts for both your professional and personal lives, please remember to be responsible about what you post and attentive of the photos that you are tagged in or associated with. Many employers, especially in K-12 settings, are very sensitive to the social media presence of potential employees. Also, remember that in this era of "Googling" everything, your current or future employer, the parents of your students, and/or your students may choose to "Google" you and find all your social media activity. Remember that this is your professional reputation you must protect!

Success in K-12 Contexts

Regardless of the position(s) you are seeking in K-12 settings, there are a few recommended dispositions that will likely contribute to your success. We detail these below.

Collaborative

K-12 settings are collaborative environments that require all school personnel to work together with the common goal of supporting student learning. As an educational technologist in K-12 settings (regardless of your specific role), your

path is likely to intersect with administrators; teachers; building-level instructional leaders; as well as district and state leaders who focus on administration, curriculum, and testing/accountability.

Typically, your work with people such as these will be to problem solve, troubleshoot, and plan technology-related efforts to support teaching and learning. Since these different roles represent different interests, with each requiring a unique niche of expertise related to K-12 settings, successful K-12 educational technologists must be adept at listening to and working with people from different professional and cultural backgrounds. Knowing as much as possible about the roles, responsibilities, and backgrounds of the individuals you interact with will increase the likelihood that your interactions will be positive and beneficial.

Flexible

The world of educational/instructional technology is ever changing as new tools are developed and new devices are proliferating. K-12 settings may change rapidly too, as initiatives from district and state boards of education, and superintendents serve as a catalyst for new projects. As individuals in these leadership positions change, it is important to maintain a flexible perspective while coping with these changes. Continually ask, "How can I positively contribute to these new efforts?"

The ability to be flexible is also important when working in school settings with administrators and classroom teachers. Research indicates that technology is likely to be used by teachers who feel supported to use technology and who have access to onsite help in their school building (Glazer et al., 2009). Since school-based technology leaders work closely with classroom teachers, you should be ready to roll with the punches and be flexible if teachers modify planned technology-related lessons and projects. Often, as an educational technology leader in a K-12 setting, your job is to provide consultation and brainstorm ideas for teachers and other school personnel to help them make decisions that they feel are most likely to help students succeed.

Learner-Centered

In technology leadership roles, your learners include educators you are working with as well as K-12 students. Being learner-centered means prioritizing the needs of educators and K-12 students that you interact with. This information could be determined by looking at data about K-12 students' learning, surveys of educators and educational leaders about their interests and perceived needs related to technology integration. Additionally, being learner-centered includes designing professional learning opportunities and providing resources based on learners' needs. Additionally, technology leaders may also collaborate with administrators and curriculum leaders to develop technology-rich experiences to support the learning of these concepts.

For district and state educational technology leaders learner-centered work may include multiple responsibilities. This may include analyzing the needs of districts and schools in terms of technology access, technology professional development or interests, and working on developing and refining initiatives to help meet those needs. Without a doubt, learner-centered work is not the historically common mass production of one-size-fits-all professional learning, new projects, or the purchase of new technological tools. Further, learner-centered work is also not a one-time experience that can be implemented without follow-up and support. Research shows benefits of professional learning that is ongoing, comprehensive, and embedded in the daily work of teachers (Lawless & Pellegrino, 2007; Polly & Orrill, 2012).

Committed to Learning

As stated earlier, educational technology work in K-12 settings requires keeping up with changing infrastructure, technologies, audience demands/needs, and approaches to teaching and learning in classrooms. To be successful in K-12 settings, being a lifelong learner who seeks out new information is essential. Most school districts and state departments of education mandate professional learning experiences for all employers. These may include attending workshops, courses, and conferences. Such opportunities to stay on the cutting edge of K-12 technology use are invaluable, and you should definitely take advantage of them.

Summary

The potential for educational/instructional technologies to support, enhance, and extend effective teaching and improved student learning is documented in research and literature over many decades, but there continue to be examples of the misuse of technology in our schools. The need for all instructional personnel to understand and implement basic instructional design skills with technologies cannot be over-emphasized. The proliferation of blended learning options in K-12 is a global phenomenon. You may find the chapter by Persichitte, Young, and Dousay (2016) useful. In it, the authors distinguish blended from online learning settings; discuss different types of learner assessments; and describe contemporary trends, challenges, and recommendations for the effective assessment of learning in blended and online courses. The content targets teachers, instructional designers, administrators, and program managers of K-12 blended and online learning settings. Suggestions for using web-based communication tools for feedback and assessment are included, and the authors conclude with a discussion regarding implementation and assessment in these learning environments that deserve additional attention and consideration.

The jobs we have described in this chapter provide a great opportunity for professionals like you to influence the improvement of technology integration in K-12 settings and learner outcomes. You can become a "dynamic digital scaffold" —that is, "a model for blended learning that leverages technology and online programs to help teachers improve instruction at scale by personalizing the students' learning experiences" (Willcox et al., 2016). As this type of scaffolding, you will not be replaceable by technology as you will provide "unique contributions . . . to education through [your] perception, judgment, creativity, expertise, situational awareness, and personality" (p. 39).

Examples of such personalized learning are being documented in technologically-rich, face-to-face classrooms and in emerging K-12 virtual learning classrooms. So, this comment from the National Education Policy Center (NEPC) press release for *Virtual Schools Expand Despite Poor Performance*, *Lack of Research Support*, *and Inadequate Policies* reminds us of the system-wide nature of the work of educational technology professionals in K-12 settings: "An analysis of state policies suggests that policymakers continue to struggle to reconcile traditional funding structures, governance and accountability systems, instructional quality, and staffing demands with the unique organizational models and instructional methods associated with virtual schooling" (Molnar, 2017).

Final Advice

We close this chapter with a few suggestions for you as you consider your career options related to educational technology in K-12 systems today. Skills and knowledge related to technology integration and instructional design can be the "edge" that gives you the advantage in a K-12 search for any of the positions described in this chapter.

- Take advantage of as many opportunities as possible to expand your professional and personal uses of technology.
- Take care of your social media presence in all situations and in all media.
- Take active steps to develop your PLN and nurture its growth as your career progresses.
- Anticipate that, in the future, you will be expected to use technologies to connect and communicate with parents, learners, and others in ways you never anticipated.
- Consider career options that allow you to blend your instructional expertise with your interest and experience with technology.
    - For those with an instructional design background, what knowledge and skills would help you leverage technology more effectively?
    - For those with a technology background, what instructional skills and knowledge would help you impact teaching and learning more effectively?

Organizations to Consider for Additional Learning & Support

Edutopia: https://www.edutopia.org/

Gates Foundation: https://www.gatesfoundation.org/

International Society for Technology in Education: http://www.iste.org

Learning Forward: https://learningforward.org/

Lumen Learning: https://www.lumenlearning.com/

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Careers as an Instructional Design Consultant

Yvonne Earnshaw & Barbara M. Hall

Instructional Design   Careers   Consulting

The definition of a consultant means different things to different people, but it is especially important to discover its meaning for yourself. The most obvious answer is "to consult," or seek someone's opinion, advice, or guidance; or, seen from the other side, to consult is to offer someone your opinion, advice, or guidance. Think of the many ways you have already been a consultant either giving or receiving advice, guidance, and opinions. You are likely to have already been a consultant in some way today. Being an instructional design consultant is not much different than the other kinds of formal and informal consulting you have probably already done. Simply stated, a professional consultant offers considered opinions related to tailored solutions for specific clients and their needs.

In this chapter, we will introduce you to the world of consulting and discuss how to set up your business, find a job as a consultant, write proposals and contracts, and succeed as a consultant. We will also provide tips along the way that we discovered as consultants.

Becoming a Consultant

As you prepare for a job as a **consultant**, it is important to establish how a consultant is different from other types of employment. In this section, you will read about what sectors consultants work in, why firms use consultants, what skills you will need, and whether or not consulting is a good fit based on your individual circumstances.

What's the Difference Between a Consultant and Contractor?

As a consultant, you are more likely to work directly with your client rather than through an intermediary organization. If you work for yourself or with other consultants, you will need to choose a business structure, such as a **sole proprietorship** or **limited liability company (LLC)**. Under either business structure you are likely to receive an IRS Form 1099, which means that you will be paid a gross amount and you will need to pay for your own taxes and medical insurance.

A **contractor** is often perceived as someone who is working for a limited amount of time in a narrow role with specific tasks on a larger project within a formal organization. A contractor might work directly for an agency as a W-2 employee (the taxes will be paid by the agency) but work remotely or on-site at the client's organization.

There are different tax implications, legal implications, and business ownership license requirements, so be sure to consult professionals such as tax lawyers and certified public accountants (CPAs). For contexts within the United States, you might also find the Internal Revenue Service's guidance on independent contractors versus employees helpful.

Where Do Consultants Work?

Instructional design is a field of expertise that is used across all economic sectors (e.g., corporations, non-profit organizations, military, government, PK-12 education, higher education). The best source of information for employment across economic sectors, as well as information about specific occupations, is the United States Department of Labor. Be sure to review the Department's [Occupational Outlook Handbook](#) and [O*Net Online](#) for this information.

You may need additional or specialized skills, depending on the specific sector. For example, if you consult for PK-12, you may need experience teaching, evaluating, or training in that sector. If you want to consult for the military and often in government positions, you may need to have a security clearance. You cannot obtain this clearance on your own; you must be willing to work for an organization who can sponsor your clearance application.

Why Do Firms Use Consultants?

Firms use consultants for a variety of reasons. Perhaps the firm is looking for someone with specialized skills to work on a short-term (or longer-term) project or for someone with an outside or new perspective. Perhaps headcount restraints and the volatility of the labor market require the firm to look for other solutions. While consultants can provide objectivity in their evaluation and advice, note that consultants sometimes have pre-existing relationships with members of an organization's leadership who may want the consultant to offer an "objective" stamp of approval for a specific direction already identified. There are other challenges to objectivity, such as wanting to please leadership for the benefit of future contracts or some other perk. Of course, some firms hire consultants to be a genuine change catalyst. A consultant could identify current or potential problems as well as potential solutions (e.g., implementing a new learning and development approach to employee onboarding, improving accessibility within training modules, training on new software, evaluating overall quality). A firm might hire consultants to leverage their networks or just do the dirty work of budgeting and/or hiring and firing personnel (think about the movie, [Up in the Air](#) in which George Clooney's character was hired to fire people). Asking a firm's representatives why they are hiring a consultant may offer additional information to help you to identify what their needs are.

What Skills Do I Need?

The list of skills may seem short, but it takes a good deal of self-reflection to determine if you have the skills required to become a successful consultant. Whether or not you will make a career out of consulting or continue to work full-time and consult on the side, the skills are the same.

The following list will help guide you through some of the questions you should ask yourself:

- Initiative and self-motivation/discipline—Are you a self-starter? Are you motivated to work even when no one is managing you?

- Self-awareness—Do you know what you are good at? Are you a generalist or a specialist?

- Adaptability—How do you feel when schedules change, someone makes an unexpected demand on you, or opportunities and constraints shift? Can you adapt to working on time-limited projects at different benchmarks with different clients across multiple sectors requiring different aspects of your expertise?

- Structure—What is your method or practice for working? Are you more laid back or hyper-organized?

- Communication—How will you deal with difficult situations with a client?

- Project management—Are you able to juggle multiple tasks and deadlines? Can you budget effectively?

- Technological skills—Are you able to fix your own IT issues? Are you familiar with hardware and software?

- Networking—Do you have a list of professional contacts? Are you comfortable talking to strangers about your business?

Each of these questions identifies your individual skill set and where you may need to strengthen your skills. This can be done by partnering with others or working as a contractor or W-2 employee.

> ## The Most Important Skill
>
> The most important skill as a consultant in the field of LIDT is effective communication.

Is Consulting Right for Me?

As mentioned before, consulting requires a particular skill set. It also requires that you have the time, financial ability, and support system to be a successful consultant.

Time

How do you know if you have the time to be a consultant? Only you can make that decision. Do you really know how much time you spend performing tasks in the many areas of your busy life? Do you really know how much time you have for a consulting career or even a side job? If you are considering a side job, also consider whether or not your employment contract allows for that.

There are several time trackers available such as [Toggl](), [MyHours](), [TimeCamp](), [Klok](), [ManicTime](), [RescueTime](), and good ole fashioned [paper templates](). Be sure to set a specific time and deadline for exploring and deciding, though, or you might end up wasting time learning about how you spend your time.

Risk Tolerance

As a consultant, you will not be receiving a steady, salaried paycheck, so there is financial risk involved. You may want to budget money to set aside from your paychecks to prepare for an unpredictable future (e.g., fewer contracts, waiting on payments for completed work). Consulting income ebbs and flows. Toward the beginning of the year, businesses may be trying to determine their yearly budgets, so you will not have any **billable hours**. Similarly, toward the end of the year, businesses' consulting budgets may run out, also causing you to not have any billable hours. It is important to know that you will probably not be billing 100% of your work hours. You may not be able to bill a client for every hour you are working. These are considered **non-billable hours**. In fact, you may only be able to bill 50–60% of your hours to a client. The rest of the time will be spent networking or finding new opportunities. This may seem like it will not take a lot of time; however, spending a lot of time on these two tasks is critical to your success as a consultant.

As a consultant, you will also need to think about scheduled vacation time, health insurance, and retirement planning. You will not be paid for your vacation time, so you may want to have money set aside. You will also need to cover your own medical and dental insurance and set aside your own retirement funds.

Supporters and Distractors

You will encounter people and circumstances who will support or distract from your efforts. You will need to consider your individual situation and ask yourself if your partner/spouse, family, and friends will support work that may require you to work long hours or travel frequently. Will those individuals support you when your income may be scarce? Will you have to say no to that long-awaited vacation because you have a project deadline?

Setting Up Your Business

Setting up your business will require a lot of decision-making. There may be significant costs involved. You will need to examine your business's structure (e.g., sole proprietorship, LLC).. You will also need to think about what brand and work environment you want to create as well as what technology (hardware and software) you will need in order to conduct your business.

What Type of Business Structure Should I Have?

As discussed previously, you should decide whether you are going to be a sole proprietor or set up an LLC. Each state has different regulations and fee structures for setting up a business. There are also legal and tax considerations based on your decision. You may need to register separately with your state's Secretary of State website and with your state's Department of Revenue website. Additionally, you may want to consider obtaining business insurance.

How Do I Create My Brand?

As a consultant, it is important to create a brand that sets you apart from the competition. Establishing your brand includes deciding on a business name (this could be your name or having an instructional design-related name), bringing business cards to professional development events, and creating a website and a social media presence. You may also want to design a business logo that can be used on artifacts such as proposals, statements of work, marketing materials, business cards, websites, etc. You can use templates in Canva to help create your materials.

Website

You should have a website to showcase your business and your digital portfolio. You can use templates in Google Sites, Weebly, Wix, or Wordpress to build your site and then pay to customize the URL to your LLCs name or your name.

Social Media Presence

Social media can be beneficial to look for work and announce that you are looking for opportunities. Many companies have LinkedIn, Facebook, or other social media accounts through which they may post potential work.

Companies will be looking at your web presence, so be strategic when you post. Create your own content and share curated content. You may want to post best practices or articles that are related to your business. Creating a LinkedIn account is also a good idea. Using specific keywords and a targeted headline will help guide people (including recruiters) to you. Also, be sure to add a skills section to your profile.

> ### LIDT in the World
>
> Tim Slade, creator of The eLearning Designer's Academy, discusses his transition to become a full-time freelance eLearning designer. https://elearningacademy.io/blog/full-time-freelance-elearning-designer/ After reading this blog post, ask yourself these questions:
>
> - When do you want to begin your work as a consultant? Do you want to start part-time or full-time?
>
> - How much time do you have now to plan your transition?
>
> - What types of projects have you most enjoyed? What skills did you use, and are those skills in-demand in the industry?
>
> - What services will you offer, and how are your talents unique?
>
> - What opportunities can you create to diversify your sources of income?

What Kind of Work Environment Will I Have?

As a consultant, you will need a place to work. This space will vary depending on your particular needs. There are benefits and challenges to every work environment—whether you work at home, off-site, or have a workspace at the client's office.

Working at Home

There are many benefits to working at home. You will not be sitting in traffic every day, and you will have a lot more flexibility. You also will not be spending money on lunches, gas, or snacks from the vending machine.

However, you will need to treat it like a job outside of the home. It is important to have a dedicated space at home where you can work—ideally in a separate room that is not your bedroom or family room. This dedicated space should have the appropriate office equipment for your job, including a comfortable chair and functional desk/table space. You may find it beneficial to get ready for work each day and schedule a lunch break just as if you were working outside of the home.

Some challenges to working at home include isolation and distractions. In a traditional work environment, people are around you all day long. You may only interact with some people in passing at the water cooler, but it is enough to feel connected to others. "Working" at home may mean that you have more flexibility, but this can distract you from doing your actual work. Try to limit these and other distractions (e.g., TV, pets, kids, laundry).

Renting Office Space

If working at home is challenging because of the distractions, there is also the option of renting a dedicated office space. One benefit is that you have a place to go to, so it feels like you are going to work. These dedicated office spaces offer a variety of services, such as having a physical mailing address or P.O. Box, standard office equipment (e.g., photocopier, printer, and fax machine), Internet, a receptionist, kitchenette, and a conference room to meet with clients. Prices will vary depending on size of the space and services included.

There are also shared co-working spaces in several markets around the country. You have the flexibility of renting a desk only when you need it, as opposed to renting an entire office on a more permanent basis. It may also be helpful to have other freelancers/consultants around you. However, you have to consider the distractions again. Will you be able to focus on your own work and not be distracted by the projects going on around you?

If an office space is outside of your budget, find another place you can go to like a library, a community center, an apartment clubhouse, or your local (quiet) coffee shop.

Working On-Site

As a consultant, you may also be working at the client's location. Your workspace may be anything from a cubicle or desk to a shared conference room. The client knows you are there for a short-term project, so you may not have a permanent workspace. If there is a specific dress code or core business hours or work at home policy, you will need to abide by those.

You will have more direct access to the client, so you may feel like you are more like a member of a team. However, in this case, it is important to remember that you are not an employee of that company, so you may not be able to enjoy the same benefits as an employee, such as use of the gym or discounts. At some companies, you may need to have an employee escort you into the building each day. You may not have access to the same systems or be able to contact people directly (e.g., the off-site LMS administrator).

Think about what kind of office set-up you currently have. Do you have a dedicated room or space? How can you work without distractions? What furniture and equipment will you need to have to be able to effectively work at home?

What Kind of Technology Will I Need?

You will need to consider what technology you will use, such as a lightweight laptop, a separate desktop, an external monitor, a docking station, and a high-quality Internet connection. Depending on the quality of cell service at home and your cell phone plan, you may need a home phone with a dedicated line. You will also need to consider how you will be connecting with clients if you need to host video conferencing. You might want to consider using an external webcam and a USB headset depending on what is built into your computer.

You will need to consider what technology you will use, such as a lightweight laptop, a separate desktop, an external monitor, a docking station, and a high-quality Internet connection. Depending on the quality of cell service at home and your cell phone plan, you may need a home phone with a dedicated line. You will also need to consider how you will be connecting with clients if you need to host video conferencing. You might want to consider using an external webcam and a USB headset depending on what is built into your computer.

Most organizations will require you to have your own software licenses . Instructional designers use a variety of software for design and development, and some programs may only run on a PC that runs Microsoft Windows. This may impact the type of computer you purchase.

For video creation, you may need to use Adobe Rush, Adobe Premiere Pro, TechSmith Camtasia, Vyond, or Powtoon.

For eLearning authoring tools, you may need to use Articulate Storyline, Adobe Captivate, iSpring, Evolve, Adapt.

For graphic design, you may need to use Adobe Photoshop, Adobe Illustrator, Adobe Express, or Canva.

You will also want to consider how to store your assets. You may need to use Dropbox, Box, or a physical server as backup. If you are working with International and European contacts, you will need to ensure that your data storage service is compliant with EU General Data Protection Regulation (GDPR), a data privacy law.

You may also need to purchase more general business software for word processing, spreadsheet creation, and presentations. Tracking your invoices and business expenses will require financial software like Quickbooks.

Finding a Job in Consulting

Finding a job as a consultant has a lot to do with your goals. Based on those goals, you need to set the pace for the transition to becoming a consultant. You may need to start slowly, tackling a few tasks each week and "poking around" for opportunities.

Where Do I Find Opportunities?

There are different ways to find consulting opportunities. The process closely mimics a traditional job search. Searching online job sites, building a social media presence, and networking are the main ways to find opportunities. Be sure to check out the U.S. Small Business Administration's set-asides for small businesses, such as those owned by women, veterans with service-connected disabilities, and those who are socially and/or economically disadvantaged. Some state governments offer similar **set-asides**, so be sure to check with offices in your particular state. You may find it easier to secure subcontracting opportunities with larger organizations that can tackle large government contracts that are likely beyond the capacity of most small businesses, especially if you do qualify for special status with the **Small Business Administration (SBA)** or other federal or state programs.

Sites That Collate Jobs

Traditional job boards like SimplyHired, Indeed, or USAJOBS may list consulting jobs. Consulting boards like Learnexus or IDlance are also helpful. ATD and The Learning Guild both have job boards.

Local Groups

Speaking at local events in your community is a good way to network. As noted in the skills section, effective communication and self-marketing are key skills to have as a consultant. Joining a public speaking group, such as your local chapter of Toastmasters International, will help build your confidence as a public speaker; this experience will also give you the opportunity to network with other professionals. You never know when and where you will find a consulting opportunity. Check out your local chamber of commerce for networking events.

Networking at the Chamber

My (Barbara) local chamber of commerce has a weekly coffee connection hosted at a different partner's business. It's an opportunity to meet and greet 60–75 people and provide a 30–second commercial ("elevator pitch") about myself. I always, always come prepared with business cards.

Imagine you are going to attend a similar event and have 30 seconds to talk about yourself and your expertise. What would you say?

Professional Organizations

Joining a professional organization and meeting other professionals is a great way to find opportunities through online job boards and networking events. Some suggestions are ATD (both national and local chapters), ISPI, USDLA, AECT, Quality Matters, or OLC, depending on what meets your needs. Remember that many organizations offer membership discounts for students.

Career Services Office

Do not be afraid to head to your current or former university. Career services may have mailing lists to join or networking events to attend.

Targeting Specific Firms

You can always search for consulting companies as if you were a potential client. This can help to find lesser-known firms.

Cold-Calling

Cold-calling is a lot like dating. You will need to make a lot of phone calls to get your foot in the door. Be brief and say that you will follow up with an email. If you do not feel comfortable calling, you can also send an email to the company or organization. In either case, have a script ready to sell your services and know that not every meeting will result in work.

Converting a Job/Internship Posting to a Consulting Gig

Another option is to apply to a traditional job or internship posting and sell your consulting services. Be sure to include the benefits of using a consultant for this type of position. However, it is helpful to know who the decision-maker is instead of sending your resume and cover letter through an electronic system.

LIDT in the World

In this recorded webinar (58 minutes and 32 seconds), Cara North, an instructional design consultant at The Learning Camel LLC, talks about taking charge of your career. She also offers helpful tips about partnering with others, the cost of freelancing, and paying it forward: https://www.crowdcast.io/e/5tipscara

After watching the video , ask yourself these questions:

- How will you leverage social media to grow your business?

- How will you partner with non-profit organizations or higher education institutions?

- Where would you like to present?

- How can you start implementing post-mortem (lessons learned) into your current work?

Writing Proposals or Contracts

Now that you have been able to find an opportunity, you are at the proposal and/or contract stage. Depending on the size of the firm, the proposal and contract may be combined. The proposal/contract will be very detailed and will need to be thought out carefully.

What's the Difference Between RFP and RFQ?

You need to know two "big picture" items to convert a **request for proposal (RFP)**, or **request for quote (RFQ)** into a contract: the **scope of work** being sought and your capacity to meet the scope of that work. Read the scope carefully and if you have questions, email the point of contact listed. You need to completely understand the scope of the work required in order to accurately gauge your capacity to take on the work.

What I Learned From the Contract I Didn't Get

When I (Barbara) learned that I did not win the contract I had applied for, I felt relieved. As I reflected on why I felt relief instead of disappointment, I realized that the scope of work was too much of a stretch for both my area of expertise and my capacity to manage the project. The contract would have required me to hire additional associates and manage employees, which, as a consultant, I had not done before and really was not that interested in doing. What did I learn? I learned I needed to become more proficient with a couple of emerging technologies. I also learned that my capacity is not always as large as my enthusiasm.

How Do I Respond to the Request?

The "call" for a proposal or quote will have specific formatting and submission requirements. Be very careful to follow these requirements. Answer every question and respond to every section with the requested information—no more, no less. Do not assume details; clarify any questions you have. Even in clarifying the details, reach out to only the point of contact listed and only in the way(s) listed in the call.

The components of your proposal should precisely match the questions and sections stated in the call. Use the exact same language and titles. Do not add sections or attachments unless those are requested. If the call neither explicitly accepts nor declines such additional information, ask the listed point of contact if the additional information you think will be useful would be accepted by the organization. Remember the adage that less is more; too much information or too many examples could make your proposal look unfocused and unprofessional.

Many calls, especially for larger contracts, will specify the timeline after proposals are submitted. While it may be okay to follow-up with smaller organizations, especially those with whom you already know a point of contact, you do not want to breach an established protocol by pestering employees or becoming a nuisance with overt or veiled attempts at follow-up. If you cannot follow the steps outlined in the call, then an organization might assume that you cannot complete the project within established guidelines either.

Learn More About Writing Proposals for Federal Contracts

For more information about writing proposals for federal contracts, we recommend the video (4 minutes, 49 seconds), [Write Winning Bid Proposals on Federal Contracts: 6 Tips & Tricks From the Other Side](#).

After viewing the video, ask yourself these questions:

- Of the 6 tips and track, which one do you find the most challenging?

- What is your plan for implementing the 6 tips and tricks?

How Much Do I Charge?

Determining cost is always tricky. There are pros and cons to using an hourly rate versus a fixed rate. When you are first starting off, you may want to use an hourly rate until you get a feel for scoping projects. You can charge a different hourly rate for managing the project versus production work. If you charge an hourly rate, you run the risk of not calculating enough hours to complete the project or not charging enough to cover your overhead (taxes, business expenses, travel, etc.). That being said, it might be better to use fixed-rate billing rather than an hourly rate. Remember

that you are selling your value, so think of your cost in terms of a set value—not by how many hours it takes to complete a job. With a flat rate, your clients will know exactly what they will be paying. There are benefits to both sides. It's really dependent on how financially comfortable you are.

Learn More About Hourly Rates

For more information about different types of rates, we recommend the video (8 minutes, 35 seconds), [Consultant Fees - How Much Do You Charge?](#) After viewing the video, ask yourself these questions:

- How many working days per year will you have?

- How many billable days per year will you have?

- What is your daily rate for clients?

As a guide, The Learning Guild's "[Degrees for L&D Professionals: What, Why, and Worth?](#)" provides salary information and degree expectations. This may provide a starting point for you to determine what your salary should look like. Another great resource is from [Harold Jarche](#). Although his information is from 2007, the ranges are still very much in-line with what instructional design consultants charge today. You will notice that business tasks cost more than production work. Overall, the range for consulting may be from $25-$200/hr depending on what type of work you will be doing.

Learn More About Determining How Much to Charge

For more information about determining how much to charge, we recommend the TEDx Talk (8 minutes, 13 seconds) ["Know Your Worth, and Then Ask For It"](#) by Casey Brown, pricing consultant. After viewing the video, ask yourself these questions:

- What do you love about what you do?

- How comfortable are you stating your own value?

- How would you answer the value questions listed starting at the 2:33 timestamp?

- How are you letting doubts and fears define your value and limit your earning potential?

- Are you diminishing your value in how you communicate your value?

What Are the Standard Contract Components?

A contract between you and your client will ensure that your interests are protected, the work is clearly defined, and you have established communication and compensation expectations. These contracts typically have a standard set of components. Consider developing your own template for the components of a contract that you want to use. Even if the firm has a standard contract, having your own template can help you ensure that your important points are included.

Some of the components are rather obvious, like the names of the parties involved. The contract should include directly, or reference as an attachment or appendix, the specific scope of work to which both parties agreed. You and a

representative of the organization should initial each page of the contract as well as fully sign the last page. Ensure that the scope of work is signed separately if it is not included as an embedded component of the contract.

Other important components of the contract are the list of deliverables and the timeline of when those deliverables are due. Remember that deliverables occur on both sides of the project and not just from you to the firm. For example, what access to resources, like key individuals and documents, will you need to be successful? Make sure there is written confirmation that such access will be granted, and include such permission and access as part of the detailed timeline. Clients' approvals of different stages of a project, especially a large project, should also be included. How long after you share a design plan or set of storyboards should the client offer feedback and approval? Include the specific dates or time range (for example, "within five business days"). For planning purposes, be sure that you know all of the tasks that need to occur to reach each benchmark along your timeline and that the timeline is approved by both parties.

Finally, communication expectations and information for both primary and secondary points of contact should be listed in the contract. In terms of communication, how often are status reports expected, and to whom should those reports be submitted? Are there different individuals who grant permissions, answer questions, and receive status updates? What are acceptable ways to communicate (in person, email, telephone, postal mail)? The approved or preferred methods of communication should include the names of specific individuals (at least one primary point of contact and one secondary, backup point of contact) and their direct contact information, such as individual email addresses, room numbers, or telephone numbers.

Costs, Payments, and Penalties

You will need to determine the costs, payments, and penalties involved when billing a client. You will also need to identify when you want to be paid and what your cash flow will look like. Let's think about this situation: You state that you will invoice biweekly, net 30. What does this mean? It means you will start working on day 1, submit an invoice around day 15 (bi-weekly is every other week), and then the 30-day clock starts. The client will have 30 days to pay the invoice. What does this mean for you? You will not see a check until 45 days after you have started the work. How will you pay your bills if you do not have income for six weeks? Unfortunately, that first check may be delayed by the mail and the client's accounting department. So, in reality, you may not see a check for nearly two months. You may want to change your payment terms to net 15. You can also include a penalty for late payments. A typical charge is 1.5% compounded monthly for late payment.

Non-Disclosure and Non-Compete Agreement

Both of these provisions protect the client. **Non-disclosure** prevents the consultant from discussing trade secrets, client lists, and other pertinent information. It may also prevent you from listing the company name on your website. You should get permission from the company (in writing) to use them as a reference or mention that you did work for their company.

Non-compete prevents you, as the consultant, from starting up your own business after consulting at a company for a designated time period, which could be from six months to two years (any more than that and you should consider whether or not you want to take the position), and within a certain geographic area (which should be focused and not broad like "East Coast"). It may also include information about not soliciting clients or employees from that company.

An important note is that not all states allow non-compete agreements. They are governed by state laws, so check with your state to determine whether or not you can include one in your contract.

Early Termination of Contract

Unfortunately, contracts may need to be terminated early. This could be for a variety of reasons, but it should be reserved for really serious issues such as non-payment. In the contract, there should be a clause about terminating the contract early. This clause should include a minimum timeframe for written notification of termination (e.g., 30 day, 60 day) and if there is a penalty associated with early termination.

Succeeding as a Consultant

After you have finished your first project (and subsequent projects), a good tip is to think about what lessons you learned—lessons of what worked, what did not work, and how you can move forward. Apply what you have learned to future experiences in the field.

How Do I Adapt to Changing Needs?

As a consultant, you will be juggling both your personal life and your professional life. You may need to move to a different city or state, or your kids may need you to have a more flexible schedule in order to be more involved with their extracurricular activities. You may need to hire additional resources to assist you while you work on multiple projects.

Clients may change depending on their needs and budget. Additionally, as the economy changes over time, your focus on a particular industry may change. Who knew the high-tech industry was going to take a hit in the early 2000s, the mortgage industry was going to experience a crisis in 2008, or that there would be a global pandemic in 2020? Be prepared, and have a safety net for the leaner times.

What Do I Do When Things Go Wrong?

As with anything in life, there may be times when something goes wrong at the company, in your personal life, within the client/consultant relationship, or with something outside of either's control. During these difficult times, you have resources available to you. Ask for help from a mentor when you need it. You can find mentors through the SBA (check out SCORE) or your network.

How Do I Maintain and Grow My Client List?

The best way to maintain and grow your client list is to keep working. Be careful of relying on a single client. While the work may be steady and lucrative for a while, the client's needs or budgets may change. One way to grow your client list is to look at other firms that do work similar to the work of your current clients. However, remember your non-compete or other agreements before investigating if those firms have similar needs.

Another way to grow your client list is to reconsider some of the decisions you made at the beginning of your consulting journey. Do you want to broaden the kinds of consulting work you are willing to do or perhaps the kinds of clients for whom you are willing to work? New opportunities may have popped up since the last time you looked in your area; there might be new firms or changing needs. Repeat some of the steps in the Finding a Job section to see what might be new.

Meanwhile, the best way to maintain your client list is through simple relationship management. Always provide quality services. Occasionally reach out to offer casual greetings or an article you know is relevant to your client's work without seeking anything in return. You might even consider sending seasonal cards, small fruit baskets, or offering free webinars to the firm's employees or associated organizations. Always remember to maintain the relationship in ways other than just soliciting work.

How Do I Stay Current?

Staying current is an important part of being a successful consultant, and it requires some introspection. Think about your reputation as a consultant. Do you perform quality work and deliver the materials on time? Are you still networking with others in the field by speaking at local events and conferences? Do you need to update or refocus your skills? Are you using the most up-to-date software? Are there gaps in your knowledge? These are all things you should consider in order to stay current

Conclusion

Now that you have been introduced to consulting, we hope that you are walking away with some information that will help you decide whether or not consulting is a good fit for you. Consulting can definitely be an exciting, yet challenging, job. It can force you out of your comfort zone and provide many great opportunities to hone your craft within LIDT.

1. Instructional design and educational technology are broad fields, and you are unlikely to have the expertise or interest in all areas. Therefore, define some of what you will do as a consultant by noting what you do not want to do. Start an ongoing list of instructional design and educational technology tasks. Then, chart those tasks across four quadrants based on your interest and expertise. Look for consulting opportunities in your high interest and high expertise quadrant.
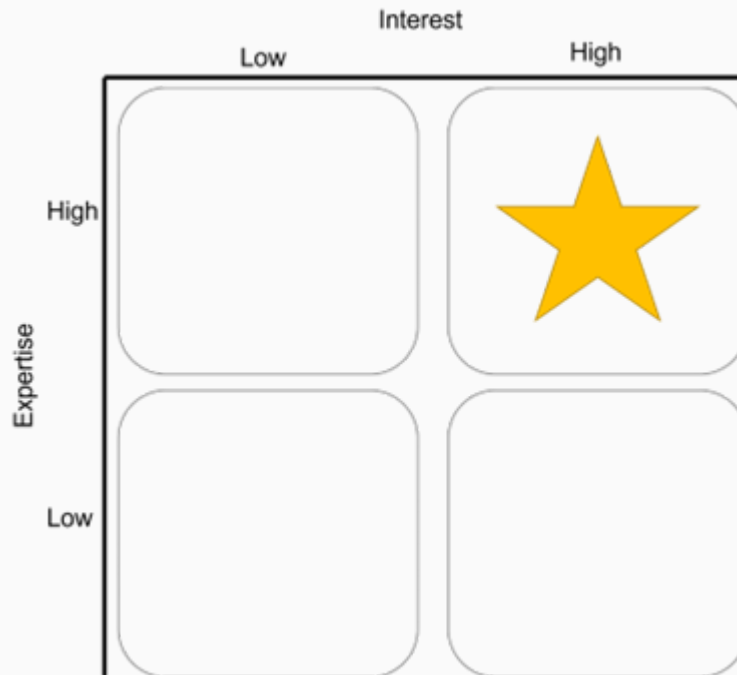
2. Set a timer for three minutes of brainstorming. Once the timer starts, write down the names of specific business owners with whom you have a personal relationship or are acquaintances. An acquaintance is someone who is close enough that they would remember you if you saw each other at a store or at a social gathering. Remember to include other consultants because they are business owners too. After three minutes of creating this list, request to schedule at least one informational interview with one of these individuals each week. The purpose of the informational interviews is to learn more about the broad economic sector of their business as well as their particular company. Conducting these informational interviews will help you (a) learn more about the types of problems and needs found in that industry and (b) consider whether you would like to work as a consultant within that industry.

3. Think about this situation: You recently participated in a networking event at your local Chamber of Commerce. You met a small business owner who was intrigued by your services. They ask you about instructional design and if it could help with a problem involving their personnel. The following week, you meet with them to share more about the field. How will you define instructional design in a single sentence for someone who is completely unfamiliar with the field? Next, compose a list of at least three questions you might ask in order to learn more about the business owner's personnel problem and whether your services might be able to help solve their problem.

Additional Resources

Business Sites	
IRS: independent contractors versus employees	https://www.irs.gov/businesses/small-businesses-self-employed/independent-contractor-self-employed-or-employee
EU General Data Protection Regulation (GDPR)	https://gdpr.eu/
U.S. Small Business Administration (SBA)	https://www.sba.gov/
SBA: Business Insurance	https://www.sba.gov/business-guide/launch-your-business/get-business-insurance
SBA: Choose a Business Structure	https://www.sba.gov/business-guide/launch-your-business/choose-business-structure
SBA: SCORE Business Mentoring	https://www.sba.gov/local-assistance/resource-partners/score-business-mentoring
SBA: set-asides	https://www.sba.gov/federal-contracting/contracting-guide/types-contracts
SBA: socially and/or economically disadvantaged small businesses	https://www.sba.gov/federal-contracting/contracting-assistance-programs/small-disadvantaged-business
SBA: veterans with service-connected disabilities	https://www.sba.gov/federal-contracting/contracting-assistance-programs/veteran-contracting-assistance-programs
SBA: women-owned small businesses	https://www.sba.gov/federal-contracting/contracting-assistance-programs/women-owned-small-business-federal-contract-program
Organizations	
AECT	https://aect.org/
ATD	https://www.td.org/
ISPI	https://ispi.org/
OLC	https://onlinelearningconsortium.org/
Quality Matters	https://www.qualitymatters.org/
USDLA	https://usdla.org/
Branding	

Canva	https://www.canva.com/
Google Sites	https://sites.google.com/
Weebly	https://www.weebly.com/
Wix	https://www.wix.com/
Wordpress	https://wordpress.com/
Job Boards	
ATD	https://www.td.org/
IDlance	https://www.idlance.com/
Indeed	https://www.indeed.com/
Learnexus	https://learnexus.com/
SimplyHired	https://www.simplyhired.com/
The Learning Guild	https://www.learningguild.com/
USAJOBS	https://www.usajobs.gov/
Networking Groups	
chamber of commerce	https://www.chamberofcommerce.com/chambers
Toastmasters International	https://www.toastmasters.org/
Time Trackers	
Activity Logs (paper trackers) from Mind Tools	https://www.mindtools.com/a52felv/activity-logs
Klok	https://getklok.com/
ManicTime	https://www.manictime.com/
MyHours	https://myhours.com/
RescueTime	https://www.rescuetime.com/
TimeCamp	https://www.timecamp.com/
Toggl	https://toggl.com/

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Careers in Museum Learning

Making a Difference in Museums Through Instructional Design

Stephen Ashton, Kari Ross Nelson, & Lorie Millward

Museums have a long and storied place in communities around the world. From the smallest hamlet to the largest metropolitan city, museums are places where people go to understand the past, to inform their present, and to gain insight into and even influence the future. Many principles of instructional design allow museum professionals to create visitor-centric organizations, spaces, and programs that help museums become embedded within their communities as trusted places of learning.

In this chapter we will address why and how a museum may use instructional design principles to understand its purpose, hone its mission, and create environments and programs that matter to their visitors. We will discuss the role of informal learning and design thinking in a museum context and will discuss museum careers that are relevant to instructional designers and how one might prepare for them.

The range of museum types is as diverse as people, and each museum has, or should have, a clear purpose guided by a focused mission. Some museums are collections-based, meaning they exist to collect and care for objects, artwork, or scientific specimens, while other museums are experience-based, meaning they exist to engage visitors in some type of activity to fulfill their purpose.

For example, a natural history museum's purpose may be to collect specimens and conduct and share research on the plants, animals, and geology of a particular area. To support this purpose, this museum might have a mission to interpret ongoing research through engaging exhibits and programs that feature their collections so that visitors may gain a better understanding of the natural history of the area.

On the other hand, the purpose of a children's museum may be to promote healthy physical and cognitive development in early childhood. To support this purpose, this museum might have a mission to engage the whole child through imaginative play, storytelling, and hands-on investigations, using interactive exhibits and immersive spaces that invite children to participate in playful learning.

As community needs, demographics, and/or understandings change, so must a museum's purpose and mission. Without adapting, the museum will likely lose its relevancy, and potentially its funding. This is why principles of design thinking, are vital for a museum in developing a purpose and mission that matters to its constituents.

Informal Learning in Museums

According to research conducted by museum researchers John Falk and Lynn Dierking, only 5% of learning happens in a classroom setting, which suggests that the bulk of it happens outside of the school environment and extends over a lifetime. Informal, lifelong learning experiences include pursuing a hobby, discussions with family and friends, watching

television, surfing the internet, reading, exploring the outdoors, and visits to museums and similar organizations (Falk and Dierking, 2013; see also Boileau, 2018, in this book).

Museum environments are designed to promote free choice, meaningful learning. Their galleries, exhibits, and programs present multifaceted, dynamic portrayals of science, art, history, and other topics, and allow visitors significant choice and control over what and how they learn. They encourage direct and/or facilitated experiences with content, phenomena, and objects; engage visitors physically, emotionally, and cognitively; and provide opportunities to connect new information to prior knowledge and personal interests (NRC, 2000).

Free choice learning in museums is powerful because, unlike school, with a set curriculum and progression, people choose to visit the institutions that hold collections or offer experiences that appeal to them personally. While in the museum, visitors can engage in exhibits and activities of their choosing, which essentially allows them to curate their own learning experiences. For this reason, museums often present differing levels or complexity of content, multiple perspectives, and personal facilitation.

Design Thinking in Museums

In this section we will discuss design thinking in a museum context. Rather than go into great detail about the history and varieties of design thinking, as was thoroughly done by Vanessa Svihla in the "Design Thinking and Agile Design" chapter of this book, we will highlight how museums are incorporating different aspects of design thinking into their practice.

Understanding the Museum Context

The use of design thinking in museums is a relatively new trend in the museum field. Traditionally, museums were established as object-oriented facilities with the role to preserve precious objects (Educational Facilities Laboratories, 1975). Museums were seen as the authoritative source of knowledge about these objects. Curators decided what was important for the museum visitors to learn. However, in the mid 1900s some museums, particularly children's museums and science centers, made the shift to become hands-on, experience-oriented institutions (ibid.). Over time many other genres of museums also made this transition from a "look but don't touch" approach to providing engaging learning experiences. Museums started to embrace a constructivist view of learning, which meant museum visitors could draw their own conclusions about museum objects rather than being dictated by the museum curators. More emphasis was placed on the visitor and less on the collection.

For example, in the late 1990s the Exploratorium, an industry leading hands-on science center in San Francisco, introduced exhibits that encouraged Active Prolonged Engagement (APE) (Humphrey & Gutwill, 2005). The open-ended nature of the exhibits allowed the visitors to test their own theories, build their own models, and lead their own scientific experiments. These put the visitors at the center of the experience rather than the exhibits. Additionally, Pekarik (2010) emphasized the importance of centering the experience on the visitors rather than on the exhibits. He stated,

> To see the museum as a field of potential for human growth is to see it as a place that serves others…Its task—from this perspective—is to provide a setting that is as rich with opportunities, as alive and intriguing, as is humanly possible. The museum becomes, in a sense, a hyper-reality—a trackless realm to play in . . . that offers opportunity for engagement in multiple ways, with the capacity to be intense and powerful (p. 110).

With this in mind, human-centered design, and design thinking in general, has naturally become an increasingly important and effective tool for museum professionals.

What Does Design Thinking Look Like in Museums?

In this section we will briefly discuss the use of design teams in a museum setting and then will detail a specific design case in the building of the Museum of Natural Curiosity at Thanksgiving Point in Lehi, Utah.

Projects that incorporate design thinking or human-centered design are most successfully accomplished with a team. In museums, these teams are commonly composed of individuals from across the organization from several different departments. For example, in larger museums where there are designated staff members for each area of expertise, an instructional designer may be on or lead a team with individuals from the following departments:

- Education and programming
- Exhibits and fabrication
- Audience research and evaluation
- Visitor/Guest services
- Content matter experts (curators)

To successfully lead or participate on a museum design team, an instructional designer will need to understand the role of each of these departments. Similar to an instructional designer who works at a computer company and has to "speak the language" of the software developers, testers, graphic designers, etc., an instructional designer on a museum design team needs to "speak the language" of the various departments. It is not expected that an instructional designer be a content expert on the project being considered; rather, an instructional designer is a facilitator of the design process.

The Case of the Museum of Natural Curiosity

To illustrate how design thinking can be used in a museum setting, we will describe how the different components of the design thinking process were used in the building of the Museum of Natural Curiosity at Thanksgiving Point Institute in Lehi, Utah. The Museum of Natural Curiosity opened to the public in May 2014. Many years before it opened, Thanksgiving Point, a multi-museum complex, began the process of design in preparation for the new venue experience. The team at Thanksgiving Point closely followed the following design cycle, although you will see that the steps were not exactly linear:
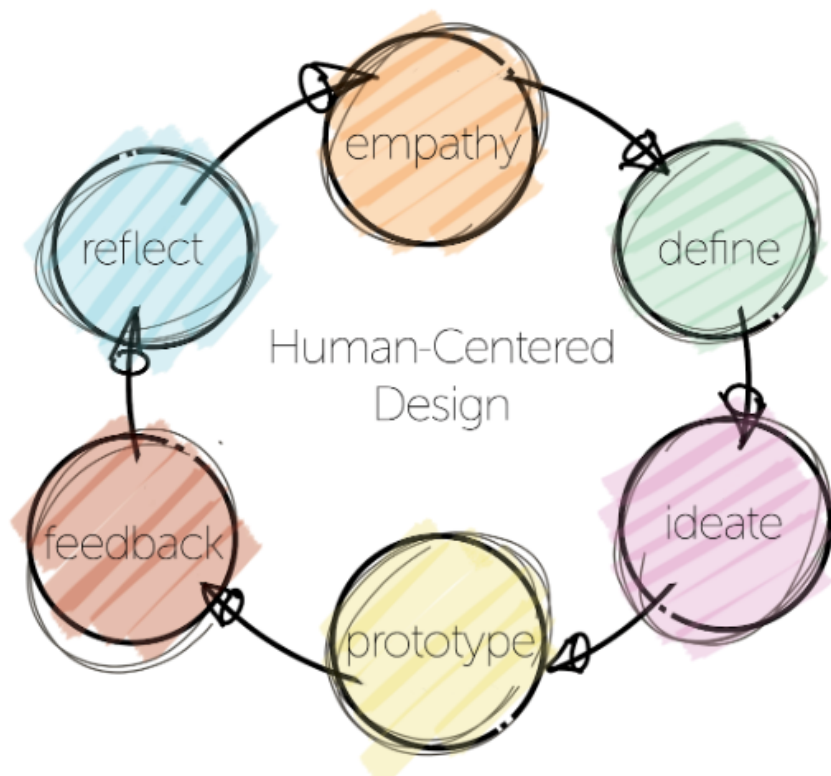
Image courtesy of Blake Wigdahl at Western Architectural Services.

Figure 1. Human-centered design

Empathy Mapping

The Thanksgiving Point design team learned from visitor feedback—through surveys, observations, and informal interviews—that the visitors wanted to have a children's museum built at Thanksgiving Point. After deciding to move forward with the decision to build one, the design team, along with board members and senior managers, visited some of the most reputable children's museums and science centers throughout the United States. Our purpose was to gather ideas and best practices and to understand how these museums were meeting their visitors' needs.

Define

Originally, we intended to build a children's museum. However, we realized we wanted a museum that was focused on the entire family, as families were our primary audience at Thanksgiving Point, rather than just children. Also, when we visited science museums around the country, we realized we wanted to have elements of hands-on science centers as well. The Museum of Natural Curiosity was then defined as a family museum. It was to be a hybrid of a children's museum and science center. Defining this clearly gave us specific direction as we moved forward with the design of the museum.

Ideate

The Thanksgiving Point design team ideated many times throughout the process of designing the experience for the Museum of Natural Curiosity. Thanksgiving Point also contracted with an outside design firm to help develop ideas and fabricate the exhibits. The design team and outside design firm held many brainstorming activities together and at times included other key stakeholders, including visiting families and board members. As ideas were generated, favorite ideas rose to the top, and then those ideas went through additional stretches of ideation. In a way, each exhibit idea went through its own design process.

Prototype

Because Thanksgiving Point is a multi-museum complex, we already had a museum with space for testing our ideas. The Thanksgiving Point exhibits team developed a prototyping space in a traveling exhibit gallery that they called the Try It! Lab. The lab was a design space behind a plexiglass wall. When the exhibit developers wanted to try out a new idea, they would build a mockup of the idea, take it out to visiting guests on the other side of the plexiglass, and get their feedback on it. The prototype was enhanced or adjusted to incorporate the feedback from the guests. All of the exhibits in the Museum of Natural Curiosity went through an extensive amount of prototyping.

Feedback

The Thanksgiving Point design team used the Audience Research and Evaluation Team to help measure guest feedback throughout the entire process. They helped measure guest feedback on the exhibits and programs. Additionally, before the museum was opened to the public, there were three months set aside for testing. During these three months, many outside groups, including schools, special needs groups, and families were invited to attend. The entire three months was spent getting their feedback and incorporating it to improve the overall experience.

Reflect

The Thanksgiving Point design team reflected often on the process and project throughout the design process. It was helpful to regularly check our progress toward accomplishing our goals. Additionally, we have reflected on the design of the Museum of the Natural Curiosity as we have designed additional exhibits and experiences. The design team is now designing for Thanksgiving Point's fifth and newest venue, the Butterfly Biosphere. The team is reflecting on and taking lessons from the Museum of Natural Curiosity experience to help ensure the Butterfly Biosphere also meets the needs of visiting guests.

The Museum of Natural Curiosity opened with high commendation from the community and Thanksgiving Point visitors. The revenue budgeted for that fiscal year was far exceeded, especially the Thanksgiving Point membership budget. The increase in revenue was attributed to the success of the Museum of Natural Curiosity. Many museum professionals also visited and gave very positive critiques of the new museum. One museum and design professional said, "I could tell as soon as I walked in that this museum was built with design thinking at its core."

Instructional Design Careers in Museums

Careers in museums are as varied as museums themselves, and the study of learning and instructional design is a great preparation for many museum jobs. If you land work in a small museum, be prepared to wear multiple hats! In a larger museum, your work may be more specialized, but collaboration with other departments will be important for cohesive and effective learning experiences for your visitors.

Below are some common positions in museums that practice learning and instructional design in their work. Many of the descriptions include real-word perspectives on the work in call-out boxes labelled "From the Field." These quotes come from anonymous responses to a survey we distributed to practitioners in January, 2018.

Educational Programming

Museum educators design, develop, and deliver programs that enhance a visit to the museum for visitors of all ages. Programs may take the form of guided tours, facilitated gallery activities, lecture series, outreach materials for classroom teachers, digital applications, summer camps, maker spaces, and more. Educators play an important role on exhibit teams to strengthen the educational soundness of an exhibit. They work with curators/content experts to ensure the accuracy of educational programs. While there are no report cards, tests, or required curriculum, don't think this isn't serious work! It is important for a museum educator to systematically apply an understanding of development stages, learning theory, learning objectives and outcomes, and learner-centered design to the experiences they create. Organizational, budgeting, and "people" skills are also vital.

Research and Evaluation

As informal learning environments, we don't give our visitors tests as they leave the museum, so how do we know visitors are learning from the exhibits and programs we design? This is the role of museum evaluators. Evaluators work with designers and educators to explore the effectiveness of their exhibits and programs. In addition to surveys and interviews, museum evaluators use prototype testing, observations, and a variety of other creative methods to explore how the museum is meeting its goals.

Researchers take on the additional responsibility to study the nature of learning in museums to add to the body of knowledge that helps us optimize what we do in them. Museum evaluators should have competency in both quantitative and qualitative research methods, data analysis, evaluation planning, and research ethics. It's also helpful to be familiar with the process of design and the role of evaluation within that process.

Exhibit Design and Fabrication

Exhibit designers craft compelling stories to share with museum visitors. Working with curators, content experts, and other museum staff, exhibit designers select topics, develop concept plans, write labels and interpretive text, and build and install components – both physical and digital. You might think of museum exhibitions as a kind asynchronous learning – with the exhibit designer being the instructor, the museum visitor the learner, and the exhibit as the medium. With this in mind, learner-centered design thinking, conceptual planning, spatial planning, project management, and storytelling are all important skills in this job. While not traditionally taught in instructional design class settings, physical construction and design skills such as technical drawing, material building, woodworking, and other basic carpentry skills are also marketable skills for an exhibit designer.

Leadership Team

Depending on the size of the museum, the leadership team may include an executive director, senior management, the board of directors, grant administrators, development directors, and others who set the vision and evaluate opportunities through the filter of the museum purpose and mission. A museum's leadership team oversees all aspects of the visitor experience by managing the staff that works to offer unique experiences for visitors every day. This may even include overall venue design and construction! An instructional designer in a leadership position will help set the overall goals of the museum. The mission he or she helps draft will greatly determine the trajectory of learning that occurs within the museum. In these leadership positions, management and budgeting skills, along with the ability to think long-term, are especially important.

From the Field

"That there is a great deal of internal education necessary to bring colleagues into the awareness that learning and instructional design is a highly developed specialty field (every bit as deeply theoretical as art history, etc.), and that approaches that include a sophisticated understanding of learning theory and content delivery are more effective than going by the gut or following unquestioned conventional beliefs about what museums do."

Consultant / Design Firms

As non-profit organizations, many museums hire consultants and contractors on a project by project basis to save the cost of a permanent employee or when the scope/nature of the project is fixed. This work may be in any of the above areas and allows you the flexibility that comes with self-employment. Generally there are not entry-level positions as a contractor. You will likely need extensive experience in your chosen field for credibility.

From the Field

"Get museum experience and "street cred" in the museum setting — even better if you can build some expertise in a subject matter. It's important that your museum colleagues respect your abilities early on so that you can bring convincing authority to your learning/ID work."

Getting Started

For any museum job, a great place to start is volunteering and internships. Find a museum or museum professional whose work interests you and reach out. Take the initiative to offer your time, ask questions, and expand your network. Be prepared to get this initial experience (even internships) without being paid – remember that non-profit status? But the sacrifice will pay off – most museum professionals really enjoy what they do!

There are other things you can do in grad school to prepare for a museum career. Consider taking classes about informal education or the principles of learning. Museums will be interested in hiring people that have previous, practical experience with design projects, research, and evaluation. If you are interested in going into museum management, taking financial and other business strategy classes will also be very helpful. Museums value employees that can think independently but can also work well on a team.

We have seen some graduate and even undergraduate students find success in getting hired at a museum by first offering their services. For example, you might contact a museum professional and say something like, "I am conducting a project on how families learn together in informal learning settings. Is there a way I could partner with your museum to study this more closely? I have the support of my advisor, Dr. X, and I would love to be able to share more with you about this project." Or another approach would be to keep things more open and to ask the museum what they are currently working on. For example, you might say, "I am a graduate student that is very interested in the museum field. Are there any projects occurring right now at your museum related to exhibit design that I could help with? I have the following expertise."

You will find that museums are generally very open to working with and sharing their ideas with others, including college students. It is not uncommon for museum professionals in one museum to ask museum professionals from other museums for ideas on increasing revenue, increasing visitor satisfaction, improving exhibits and educational programming, etc. The museum field is very collaborative.

Lastly, attending one of the professional associations listed below will provide you with some great exposure to the museum field. Many of the associations listed below offer student scholarships for free registration, travel, and lodging.

From the Field

"Having a career related to learning and instructional design in a museum setting is very rewarding for me. I get the opportunity to learn about so many diverse topics and to work with scientists from a range of fields. I also appreciate that I get to work on products from the very beginning, brainstorming ideas, to the "end," when students and museum visitors are using, learning from, and enjoying the products that I've worked on."

Professional Associations

There are several museum-related professional associations, each with their own informative websites (great places to check out museum job listings), listservs, peer-reviewed journals, and conferences. For starters, explore these, but also search for state and regional museum associations for opportunities close to home.

American Alliance of Museums ([aam-us.org](aam-us.org)). Established in 1906, AAM represents more than 35,000 individual museum professionals, volunteers, and institutions. They help to develop standards and best practices, gather and share knowledge, and provide advocacy on issues of concern to the entire museum community.

Association of Children's Museums (childrensmuseums.org). Started in 1962, and with more than 400 members in 48 states and 20 countries, ACM seeks to leverage the collective knowledge of children's museums through convening, sharing, and dissemination.

Association of Science-Technology Centers (astc.org). ASTC is a global organization for science centers, museums, and related institutions. ASTC strives to increase awareness of the valuable contributions its members make to their communities and the field of informal STEM learning. Founded in 1973, ASTC represents over 600 members, including science centers and museums, nature centers, aquariums, planetariums, zoos, botanical gardens, and natural history and children's museums, as well as companies, consultants, and other organizations that share an interest in informal science education.

Visitor Studies Association (visitorstudies.org). VSA is dedicated to understanding and enhancing learning experiences in informal settings through research, evaluation, and dialogue.

Museum Education Roundtable (museumedu.org). Museum Education Roundtable provides scholarship and professional learning for museum educators.

Relevant Journals and Other Publications

There are several relevant, peer-reviewed journals and other publications we would recommend to those that are new to the museum field. The following list is not comprehensive, but it at least gives a starting point for those who want to know what topics are being discussed in the field. This list includes both research-based and practitioner-based publications.

Curator: The Museum Journal (curatorjournal.org). Curator is a research-based, peer-reviewed journal intended for museum professionals, researchers, and students that focuses on general and urgent issues that museums face.

Journal of Museum Education (museumedu.org). The Journal of Museum Education is a peer-reviewed journal that focuses on issues and ideas related to museum education. It is intended for museum, research, and education professionals. Topics include learning theory, visitor research and evaluation, strategies, and responsibilities of museums as public institutions.

Visitor Studies Journal (visitorstudies.org/journal-and-archive). Visitor Studies Journal is a research-based, peer-reviewed journal published by the Visitor Studies Association that focuses on issues related to visitor research and evaluation. The journal publishes theoretical ideas and practical solutions and is intended for both researchers and practitioners.

Museums & Social Issues: A Journal of Reflective Discourse (tandfonline.com/toc/ymsi20/current). Museums & Social Issues is a peer-reviewed journal that focuses on the way museums respond to, become engaged with, or highlight social issues. Topics include race, immigration, religion, gender equality, and other contemporary issues.

Museum Magazine (aam-us.org/programs/museum-magazine). Museum is published by the American Alliance of Museums. This practitioner-based publication addresses general issues that museums face today.

Dimensions (astc.org/publications/dimensions). Dimensions is a magazine published by the Association of Science-Technology Centers. This practitioner-based publication addresses issues and discusses solutions relevant to science and technology centers.

Hand to Hand (childrensmuseums.org/members/publications). Hand to Hand is an editor-reviewed journal published by the Association of Children's Museums. This publication includes articles and discussions related to major trends in the children's museum field and also features interviews with children's museum professionals.

Conclusion

Many principles of instructional design, when applied in a museum context, can help museum professionals create venues, exhibits, programs, and experiences that are informed by and reflect the needs of their visitors. The museum field offers a wide range of fulfilling careers for those interested in applying aspects of instructional design to these diverse, public-serving institutions.

The museum field is in constant need of bright, committed individuals who are passionate about improving the museum experience. Those with a background in instructional design have the ability to make unique contributions in many museum professions, including exhibit design, education, research and evaluation, and administration, thus influencing the overall experience for visitors. In turn, the museums can have a lasting impact on the patrons who visit them.

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Stephen Ashton

Thanksgiving Point

Stephen Ashton, Ph.D., has been the Director of Audience Research and Development at Thanksgiving Point since 2012, where he has been responsible for leading all the audience research and evaluation efforts for Thanksgiving Point. Stephen's areas of expertise include audience research, evaluation, measuring impact, instructional design, design thinking, and informal learning. Stephen has a masters and doctorate in instructional psychology and technology from Brigham Young University. In 2015 he was awarded the Rising Professional Award from the Utah Museums Association. He currently serves on the Utah Museums Association Board, Thanksgiving Point Board of Directors, and as a trustee of the Ashton Family Foundation.

Kari Ross Nelson

Thanksgiving Point

Kari Ross Nelson received a MA in Museum Studies from San Francisco State University and, after a decade of work as a museum educator, a MS in Instructional Psychology and Technology from Brigham Young University. She works as a Research and Evaluation Associate at Thanksgiving Point Institute, a mentor to students studying museum practices at BYU, and a consultant for museums and other cultural organizations in Utah.

Lorie Millward

Thanksgiving Point

Lorie Millward is the Vice President of Design and Programming at Thanksgiving Point Institute in Lehi, Utah. She oversees the design, development, and construction of all venues, exhibitions, programming, and evaluation at Thanksgiving Point including: The Museum of Natural Curiosity; Ashton Gardens; The Museum of Ancient Life; Farm Country; and Butterfly Biosphere. She has championed informal education, inclusion, and human-centered design throughout her nearly 30 years in the field. Lorie currently serves as the President of the Utah Museums Association Board of Directors, on the Western Museum Association Board of Directors, The American Alliance of Museums Diversity Committee, and the Utah Education Association Partnership Board.

Careers in Higher Education for Non-Faculty

Larisa Olesova , Belen Garcia, & Ji Hyun Yu

Case Dilemma

In an office filled with annotated scholarly articles and digital design blueprints, Chelsea, the Senior Instructional Designer at a well-regarded campus, commences her multifaceted workday. Her responsibilities include faculty training, as well as the creation, implementation, and evaluation of online and hybrid courses. First on her schedule is a consultation with Professor Allen, a tenured faculty member skeptical of integrating digital elements into his course. "Our traditional methods have always worked," he contends. Chelsea, leaning on her expertise in pedagogical principles and UX design, counters, "The aim is not to displace, but to enhance. Research supports the value of strategically designed hybrid courses for increased student engagement." His skepticism begins to wane.

During the meeting, an urgent departmental email surfaces, advocating for the adoption of a yet-to-be-tested e-learning tool. Chelsea faces the complex task of reconciling administrative imperatives with educational quality. Later, in the Faculty and Staff Lounge, she overhears two colleagues discussing prevailing myths. One declares, "Once a course is online, it practically runs itself." Others chime in, "Why do we need instructional designers when ChatGPT can generate lectures and assignments?" Seizing the opportunity, Chelsea interjects, "While technology and AI can assist, neither replaces the role of effective teaching or the need for a customized, student-focused design strategy. Another issue is that you should be aware of the technology limitations; for example, ChatGPT can fabricate false information and if you are going to use it you should always check the output."

In navigating these converging challenges, Chelsea's daily experience encapsulates the complex skill set of an instructional designer working in higher education: including diplomatic acumen and adaptability.

Questions to Ponder:

1. In what ways can instructional designers like Chelsea navigate the often-conflicting imperatives from faculty and administrative leadership to maintain both pedagogical integrity and institutional objectives?
2. How might the presence of prevailing myths about educational technology and artificial intelligence influence not just the work of instructional designers, but also the broader institutional approach to learning?
3. Considering Chelsea's multifaceted role and the range of skills she employs, what competencies should you prioritize for career growth and effective performance in higher education settings?

The Important Role of Instructional Designers in Higher Education

The field of instructional design continues to grow and evolve based on the impact that emergent technologies and education trends have on education institutions, and higher education is not the exception. Higher education (HE) institutions keep adding positions for instructional designers, educational technologists, or learning design experts.

Some HE institutions have added entire departments of instructional design professionals to keep up with the demands of providing professional development to faculty to improve their traditional courses or to train them how to teach in a new format, such as in online or blended ways. Some HE institutions are providing non-traditional learning opportunities with help of instructional design professionals that should create those experiences using new technologies.

However, there are many constraints and challenges for instructional designers working on HE. For example, faculty might have different levels of technology skill or level of desire to adopt technology. Faculty might understand differently the meaning of quality teaching, and there are some faculty that are resistant to changes on pedagogical practice.

In this chapter we will discuss instructional design jobs in higher education and how to be qualified for one. The 2022 Horizon Report highlighted the growing demand for instructional designers (IDs) in higher education (HE), indicating that they are well positioned as pivotal change agents to create digitally rich and   pedagogically sound learning experiences (Pelletier et al., 2022). The educational crisis created by the COVID-19 pandemic highlighted even further the important role that instructional designers play for higher education institutions. Moreover, the COVID crisis also expedited the growth of degree and non-degree programs in higher education or the rapid shift towards adoption of credit-bearing certifications increasing the need to hire more instructional designers (Joyner & Eicher, 2022).

While nearly every institution of higher education employs instructional designers in some capacity, different higher education institutions utilize these professionals in different ways. Instructional designers may work in centers for teaching and learning or faculty advisement centers, where they may provide consultation to faculty on curriculum development, assessment, or instructional challenges. They may also work within university libraries, media centers, technology services, freshman orientation, student services, or departments of online/continuing education. In these varied roles, they can influence policy and instruction within small departments or across the entire university. Because of the variety of career options for IDs within higher education, a wide skill set is important, making this an exciting career choice where continual growth is essential.

In this chapter we provide a practical guide to those who are interested in exploring an ID career in HE. Specifically, we will discuss traditional and new IDs' roles and responsibilities and provide descriptions of several typical ID job positions (See "LIDT in the World" at the end of this chapter). We will also explain what to expect from the work environment in higher education when IDs work with university faculty. Finally, this chapter will provide recommendations of how to find an ID job in higher education and what professional organizations can support further ID skills and competencies development and networking.

What Do Instructional Designers Do in Higher Education?

Traditional ID Roles and Responsibilities

IDs' traditional roles and responsibilities vary depending on the type of institution (Campbell et al., 2007; Dooley et al., 2007; Kenny et al., 2005; Kumar & Ritzhaupt, 2017; Pan et al., 2003; Richardson et al., 2019). The major IDs' roles and responsibilities in any HE institution are course development and faculty support. In addition, responsibilities vary depending on the type of the ID position, such as junior ID or senior ID. However, the majority of university faculty are still not sure what IDs can do and Dimeo (2017) called IDs the "best kept secret" in HE. Unfortunately, there are still misconceptions about what IDs can do, for example some academic institutions may consider IDs as "tech" people, "techies," or part of the information technology (IT) department (Ritzhaupt & Kumar, 2015) because of the variety of their position titles, such as educational technologist, instructional technologist, or learning designer. This lack of understanding may also be the result of limited institutional efforts or support to communicate what IDs can do. When institutions fail to promote innovative teaching, ambiguity may arise concerning the roles and contributions of Instructional Designers (IDs), leading to concerns among faculty, administrators, and IDs themselves about the efficacy of teaching and learning improvements. Still, traditionally, IDs have been essential to improving learning experiences for

many different types of learning environments including online, face-to-face, hybrid/blended, HyFlex, active learning classroom, and flipped learning.

New ID Roles and Expectations

As mentioned above, traditionally, IDs have been considered "consultants, facilitators, technology experts, and quality assurance checkers, all wrapped into one" (Magruder et al., 2019, p. 8). As they embody and encourage student-centered and inclusive attitudes in their engagements with faculty, students, and staff, many of these jobs are well-positioned to be high-impact change agents at their institutions (Martin et al., 2021). The emerging demand of equitable learning experiences in online and blended modalities for students has reshaped their roles and responsibilities, offering new pathways and titles such as learning experience designer, learning architect, and learning engineer. This chapter makes no such distinction between those job titles. If you are part of a large team, the various roles and responsibilities can be differentiated, with each professional focusing on a more limited set of skills. Mostly, we see ourselves wearing many hats as a one-member team or a part of a small team. We are expected to apply appropriate learning theories to given design tasks, while leveraging newly available tools that are becoming mainstream or developing new skills to remain relevant. Thus, in this chapter, we address new areas where you might want to upskill and challenge yourself!

UX/UI Methods

With the advent of online education, IDs are expected to implement user-friendly, accessible, and engaging teaching and learning strategies. By incorporating user-experience and user-interface (UX/UI) methods into the design process, IDs can identify diverse needs and preferences of learners, design learner-friendly interfaces, and test the effectiveness of their design work. Thus, IDs employ many common UX design methods, including (a) developing learner personas, or fictional representations of a typical learner created based on surveys, interviews, focus groups, or previous data; (b) utilizing wireframing, or other visual representations of a learning space (layout and functionality); (c) employing prototyping to develop a working model of the learning experience for refinement; (d) using participatory design, a collaborative design approach that involves engaging learners, subject matter experts, and other stakeholders in the design process; (e) conducting cognitive walkthroughs, an evaluation of the usability of the learning experience performed by instructional designers who imagine themselves as the learner; and (f) employing A/B testing, a data-driven evaluation method for two different design variations of a learning experience (control/experimental groups).

Learning Analytics

Learning analytics (LA) can help IDs identify patterns and trends in learner data, which learning activities are most effective, which learners are struggling, and which content needs to be revised or updated. These skills allow IDs to make informed decisions about how to design more engaging and personalized learning experiences. In addition, LA can support IDs to ensure that learning experiences are accessible to all learners. They can identify areas where a certain group of learners may be experiencing barriers to access, such as language barriers or visual impairments. To solve the issue, they can provide transcripts or captions for videos and provide alternate forms of learning materials. Most importantly, LA can help IDs personalize the learning experience by providing insights into each learner's preferences and learning needs. For example, if real-time data indicates one failed learning task and reported frustration, IDs can model adaptive learning processes that contain adjusted levels of tasks and guidance.

Project Management

ID projects in HE typically involves collaboration with subject matter experts (SMEs), instructional technologists, education program managers, and other stakeholders. Project management (PM) skills help IDs manage resources effectively, i.e., budgets, staff, and technology. Developing project plans, timelines, and resource allocation are considered critical skills that IDs should demonstrate. Another important PM skill is quality control and assurance. By developing evaluation criteria, IDs can ensure that design products meet the desired learning outcomes and effectively support the needs of learners.

Educational Research

IDs need to be able to design learning experiences that are effective, evidence-based, and grounded in learning theories and relevant studies. By staying current with educational research, IDs can not only design learning experiences, but identify areas of improvement and make evidence-based decisions about how to improve the learning experience, which can, in turn, help them generate new knowledge and contribute to the field of ID.

Critical Design Work

Critical design work involves understanding the social and cultural context in which the design work is taking place and designing solutions that address the needs and challenges of diverse learners. To create inclusive, culturally responsive, equitable, and social justice learning environments, IDs must challenge assumptions and power structures that may perpetuate inequality and oppression hidden within the education institution. They must critically reflect on their own assumptions and biases and design learning experiences that question the existing structure to promote social change.

Work Environment

Faculty Collaboration

IDs in HE work closely with university faculty, but different institutions have different approaches to IDs collaboration with faculty. Thus, the nature of your collaborations will partly depend on the leadership support and overall institutional mission. Some universities require close collaboration and accommodate IDs with favorable conditions for successful collaboration with the faculty, for example, providing flexible and remote work schedules. Because faculty always need professional development to update their skills and competencies including technology and course design skills, some institutions require IDs to conduct professional development training for faculty, cohort-based training at the university level, and/or individualized occasional consultations on-demand to anyone who requests help.

Regardless, IDs are often required to initiate collaborative relationships to create faculty buy-in and trust. Studies have identified several successful characteristics of instructional designers, such as excellent communication skills, time management skills, professional competency, and mentoring skills for successful collaboration (Kumar & Ritzhaupt, 2017; Richardson et al., 2019). Successful collaborations are more likely when relationships reflect a mutual and equal partnership between faculty and IDs as they engage in authentic problem-solving contexts, such as the course design and development process (Olesova & Campbell, 2019).

Instructional designers can also employ the concept of collaborative mentorship, which reflects a process where both faculty and IDs learn new skills, values, and culture directly from others whom they respect and admire. To facilitate this, novice IDs need to avoid being overly prescriptive, providing an answer to every potential aspect of the instructional problem. Instead, even if they feel they know the best approach to solve the instructional problem, instructional designers should build a dialogue and conversation to help faculty to develop their own conclusions and grow in their understanding of instructional design. Even if collaborative relationships do not work from the first experience, do not give up but learn from your lessons.

In forming these collaborative relationships, professional competencies, in addition to "soft" skills, are critical. We recommend seeking to develop the following essential competencies and strategies for a successful collaborative

relationship for future collaborators, based on empirical findings from the study by Richardson and colleagues (2017): (a) build trust and rapport; (b) be an active listener; (c) be a coach and facilitator; (d) be open-minded and flexible; (e) "don't be a pushover"; and (f) be sensitive to cultural differences.

Avoiding Conflict with Faculty

During the COVID-19 pandemic, IDs helped faculty transition to online and emergency remote teaching. After experiencing the benefits of flexible teaching, many faculty have actively started integration of synchronous online technologies, (i.e., Zoom) into their daily practice. As they struggle to do this, they may prefer quick tips or answers instead of developing a long-term relationship with the IDs at their institution. This may cause a conflict between IDs, who want to work towards long-term improvement of teaching and learning, and the faculty concerned with the immediate challenges. One of the sources of this conflict could be differences in understanding roles, i.e., who is the pedagogical or technology expert (Mueller et al., 2021). Another reason could be faculty resistance to the ID process or when novice IDs do not spend time building the crucial personal relationships, focusing only on completing the project milestones. Another source of the conflict could be when IDs use a lot of design terminology, making communication vague and difficult. For all these reasons, faculty may feel the process is ineffective, and they may start canceling the meetings, not responding to emails, or simply not show up for consultations.

To avoid this scenario, IDs can communicate a common goal with the faculty from the beginning, asking them (a) what do they expect from the collaboration? (b) what do they want to learn? and (c) how much time can they spend on the design process? Mutually arriving at a favorite communication strategy helps expedite and enhance the design process. It is good for IDs to be flexible and adaptive to the faculty schedule as much as possible. During the design consultation process, faculty usually look for creative but simple ideas. When IDs overwhelm them with too many ideas and tools, they become skeptical and avoid further assistance. It is always good to share only one strong, and sustainable, creative idea that is realistic and timely. By sharing helpful strategies that faculty can immediately use, these uneasy relationships can turn into rewarding collaborative ones. IDs also may be interested in reading more from scholarly publications on conflict management to apply those strategies in these real world scenarios (Mueller et al., 2021).

ID Collaboration

To keep the instructional design process current and satisfy institutional requirements, instructional designers also collaborate among themselves to help faculty find better and more creative options. For example, students who enter higher education after the COVID-pandemic have more advanced technological skills than the generation a decade ago. This requires faculty to use the most advanced tools for teaching and make instruction widely accessible. In these situations, IDs with advanced degrees usually work with the IDs with traditional master's degrees to power up the ID processes and meet faculty expectations.

For example, the design process is usually divided into a more advanced, theoretically driven, theoretical phase and a practical, technology-driven, phase. The ID with the advanced degree often facilitates theoretical phases to design learning while the ID with the master's degree transforms generated ideas into learning experiences (Elkhoury & Usman, 2021). IDs with a traditional master's degree are usually trained in practical applications of their skills and knowledge, IDs with advanced degrees communicate with the faculty to integrate principles of learning theories and current research trends. In this collaboration, faculty benefit from expedited evidence-based technologically driven solution which is a cost-relevant, engaging, and innovative.

Finding an Instructional Design Job in Higher Education

Finding a job as an ID in HE requires acquiring many different skills, such as knowledge of ID topics, use of technology, and other competencies. According to Ritzhaupt and Kumar (2015), IDs should develop soft skills in addition to ID competencies and have a solid understanding of technology tools used for teaching and learning. In addition to ID specific skills, general competencies are helpful. The National Association of Colleges and Employers conducts an annual survey about the attributes employers seek in candidates. In the 2021 survey, more than half of respondents

mentioned the importance of various capacities, including problem-solving, analytical thinking, teamwork, communication, work ethic, technical proficiency, adaptability, attention to detail, leadership, and interpersonal abilities (NACE, 2022).

Before you start looking for an ID job, study several job postings and make a plan to acquire the required skills (check Appendix). Another thing you can do is search for ID profiles and check how they demonstrate their ID skills. Compare yourself to other professionals with the purpose of improving your own skills. Reflect on what makes you unique and find a way to stand out from other applicants. Later you can use this information for a cover letter or a personal website. If you belong to an institution that supports your job search, consider attending any events they offer to improve your application documents, such as improving your resume or CV, especially if you are an international student. It will be an excellent investment of your time to meet with someone who can help you prepare for an interview.

Looking for an Instructional Design Position

There are several websites where it is possible to find job postings that advertise ID positions specifically for HE, such as:

- Higher Ed Jobs (www.higheredjobs.com)
- Inside Higher Ed Careers (www.careers.insidehighered.com/jobs)
- The Chronicle of Higher Education (jobs.chronicle.com/jobs)

You should visit the institution's career website to verify there were no mistakes about the due date or application process. Pay attention to the documents required to apply to each position. It might not be a good idea to send a lengthy research CV for a job application that requires a professional resume, because you will come across as someone who cannot follow directions.

All your application documents, such as resume and cover letter, should be tailored to a specific job posting. If the hiring committee took the time to write about the skills they need for the job, they expect candidates to clearly spell out how they fulfill the requirements for the job they advertised. The hiring manager does not have time to guess if a candidate satisfies the job requirements, so be sure to explicitly describe how you meet those requirements using the same keywords they used in their job posting.

Improving Your Online Presence

Because potential employers might search for information about you, you should improve your online presence before you start looking for a job. One easy way is to create your profile in employment-based social media sites, such as LinkedIn. You can join instructional design groups to grow your network of ID professionals. Look for other social media sites where you can connect with ID professionals or to learn about new technologies for teaching and learning.

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Updating Your Resume or CV

Most ID job postings will require you to send a resume, which is a brief summary of your academic background, skills, and working experience. It should be readable, interesting, and tailored to a specific job posting. The goal of updating your resume is to obtain an invitation for a job interview (Rosenberg, 2007). A CV is a longer document that emphasizes your research skills, and it is usually required for faculty positions. Typically, ID positions ask for shorter resumes instead of CVs, but research skills can still be desirable for ID professionals working in academia, so you might list your research experience on your website instead.

Professional Organizations

There are several professional organizations dedicated to advancing the instructional design profession, but some are more oriented to support ID professionals working in industry. While those may be useful to you, because the skills needed to work in higher education differ from the skills required for industry, this section will focus only on professional organizations that support instructional designers working in higher education specifically.

The benefits to becoming a member of these organizations are that you can participate in their national or international conferences, attend online events or workshops, access their publications, receive help for a job search, build your resume or CV by presenting yourself or participating in task forces, gain access to job posting boards, and grow your network of professionals who might become your colleagues or collaborators. Most organizations have valuable resources to support you with the job search, acquiring ID skills or supporting writing and publishing.

Some institutions send their job postings to professional organizations before releasing them to the public; members of those organizations thus can apply before others for those jobs. Some hiring institutions even schedule job interviews during the conferences. Some organizations have mentorship programs for novice IDs or apprenticeship programs for graduate students. If you are interested to become an ID at a higher education institution, consider volunteering for the following organizations and attending their events:

AECT

The Association of Educational Communications and Technology (AECT) supports scholarship and best practices of technology use for teaching and learning. This organization has many members that belong to the field of instructional design and work in higher education, such as faculty members and instructional designers. Membership is open to graduate students. Some of their divisions focus on issues of culture, learning & technology, design & development, distance learning, emerging learning technologies, and technology integrated learning.

AERA

The American Educational Research Association (AERA) is one of the most prestigious organizations in the field of education whose mission is to " advance knowledge about education, to encourage scholarly inquiry related to education, and to promote the use of research to improve education and serve the public good". This national society has several SIGs relevant to ID professionals including those with a focus on instructional technology (SIG#52), media, culture & learning (SIG#65), and online teaching and learning (SIG#35).

EDUCAUSE

EDUCAUSE is a professional organization dedicated to supporting informational technology professionals working in higher education settings; for example, aiding in the management, implementation, use and innovation of informational technology. Membership eligibility is at the institutional level.

OLC

The Online Learning Consortium (OLC) is an organization dedicated to improving online programs in a way that promotes high quality while providing for learning on a large scale so that education becomes affordable and accessible for anyone. It supports a community of higher education professionals interested in teaching and learning in online, hybrid, and digital environments.

Conclusion

Instructional designers take on many different roles. To be successful as an instructional designer in higher education, it is important to become a lifelong learner in three areas: (a) ID knowledge and skills; (b) technology tools and education research for teaching and learning; and (c) soft skills and customer service skills. IDs should be constantly

strengthening their foundational knowledge of instructional design theory, process, and practice, while staying current with new technologies that can be used for teaching and learning.

In addition, IDs should improve soft skills or customer service skills, such as adaptability and communication skills. Those are crucial to developing working relationships with faculty. For example, being patient and practicing listening skills is as important as having ID knowledge, because in academia faculty cannot be forced to use certain ID models or strategies, but they can be presented with information and encouraged to use research-based strategies. In the end, instructional designers and faculty desire the same thing: improved learning for students, and smoother instructional practices for faculty.

LIDT in the World: Examples of ID Positions

Example 1

To be selected for this senior instructional design position at a public university, the candidate needs an advanced degree, EdD or PhD, in education or closely related field, and not necessarily in the field of learning, design, and technology. Senior ID is responsible for working collaboratively with faculty, subject matter experts (SME), and cross-departmental stakeholders to conceptualize, design, and develop high-quality programs and courses, as well as supporting the office research and training initiatives. The senior ID takes a mentorship role, actively engaging in the team's development of scalable, quality programming. Duties include working directly with faculty and SMEs in the analysis, design, development, and quality assurance/checks of effective instructional programs and creating both team and faculty development initiatives focusing on areas such as effective online course design, new tools and technologies, and research-driven teaching practices.

Example 2

This instructional design job is at a public university regional campus which has high research activity; however, the primary focus of this institution is teaching. For this position it is desirable to hold a PhD or EdD in ID, educational technology, or a closely related field. ID is responsible for training faculty and instructors to implement ID models, strategies, and best practices in traditional, hybrid or online courses. Due to the ID: faculty ratio, the emphasis is to prepare faculty to become self-sufficient when designing their courses or creating instructional materials. At this institution, it would not be sustainable to create course materials or develop courses for faculty. The main requirement of this position is to support faculty development to improve college teaching either during one-to-one consultations or by organizing faculty workshops. Ideally, offering faculty practical ideas based on evidence they can implement in their courses without a huge demand of time and effort. Building good work relationships with faculty is a strong commitment of this job and this requires nurturing trust. In other words, ID should sharpen soft skills such as teamwork, communication, and customer service. Occasionally, ID works collaboratively with faculty in research projects relevant to the scholarship of teaching and learning. Working at small institutions often requires participation in an array of committees and supporting college-wide initiatives.

Example 3

This example is for a lead learning experience designer working at a research university. Learning experience design lead is responsible for supervising and mentoring the Learning Experience Design team, which is responsible for pedagogical research, instructional design, user experience design, course engagement, and evaluation. The primary duties include developing strategies to monitor, evaluate, and iteratively improve courses regarding learner outcomes and engagement in a variety of educational settings (e.g., online, blended, immersive learning); provide leadership in developing learning experiences that exceed expectations regarding accessibility, copyright compliance, and use of open resources; lead the design of new tools, templates, and resources that support faculty innovation in digital education; and conduct and disseminate research and analysis on new and emerging technologies, instructional design theories, and approaches.

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