



What are employers expecting from instructional design and learning technology professionals across sectors?

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ABSTRACT

As new technologies and learning practices emerge, the way instructional design and learning technology (IDLT) professionals conduct their work evolves. With this constant evolution comes a change in employer expectations of IDLT professionals. This convergent mixed methods study analyzed 130 IDLT-related position descriptions and interviewed 12 IDLT leaders from the K12, nonprofit, higher education, and corporate sectors to identify current expectations related to degree qualifications, knowledge, skills, and abilities expected from IDLT professionals. Results included a preference for a master's degree-level qualification, at times due to bureaucracy, and an interest in the combination of academic preparation with instructional design experience. Additionally, employers shared that they were interested in an advanced understanding and adaptable application of IDLT theories, models, and frameworks, as well as a need for non-specific IDLT skills (e.g., communication and collaboration) and familiarity with IDLT-related technologies (e.g., learning management system and course authoring software). These results provide valuable insight for those looking to join IDLT field, current IDLT professionals interested in upskilling, and educational programs preparing future IDLT professionals for the workforce.

Keywords: instructional design, learning technology, K12, higher education, corporate, non-profit, KSAs (knowledge, skills, and abilities)

INTRODUCTION

With learning experiences growing and changing across education sectors due to rapid and continuous emerging technologies and practices, the instructional design and learning technology (IDLT) field is considered to be in a state of evolution (Beirne & Romanoski, 2018). But what does this mean for individuals interested in transitioning into the field, current professionals in the field, and preparation programs? This state of evolution necessitates frequently reviewing and researching what degrees, knowledge, skills, and abilities IDLT employers expect from their employees to best support current and future professionals in finding success in the field.

The formal origin of instructional design began as early as World War II from the need to train large groups of people (Reiser, 2002, as cited in North et al., 2021). According to Zippia (2024), there are almost 100,000

instructional designers currently in the United States, and instructional design positions are projected to continue growing (i.e., 7.0% from 2018-2028, translating into approximately 15,000 new jobs). Similar to how the original need to train and educate people has only grown across sectors (e.g., K12, higher education, corporate, and nonprofit) and in the number of positions over time, the knowledge, skills, abilities, and qualifications of IDLT individuals have also grown over time, continually evolving as new practices and technologies emerge.

There have been recent studies (Gray et al., 2015; Intentional Futures, 2016; Kang & Ritzhaupt, 2015; Klein & Kelly, 2018; Magruder et al., 2019; Nworie, 2021; O'Malley, 2017) that have examined the instructional design field. Intentional Futures (2016) identified that instructional designers tend to have a great number of responsibilities that include designing instructional materials, managing instructional efforts, training others on technology use, and supporting others as they encounter instructional challenges. Responsibilities like these often necessitate specific skills and manifest in formal degree requirements and employer expectations.

Formal Degree Requirements

In much of the research that has been conducted previously, a bachelor's degree was the most common degree required for instructional design professionals (Kang & Ritzhaupt, 2015; Klein & Kelly, 2018; Nworie, 2021). In some cases, a master's degree in an instructional or educational technology-related area was preferred, as was a number of years of experience in instructional design, teaching, technology development, research, or graphic design (Intentional Futures, 2016).

Instructional Design & Learning Technology-Specific Expectations

Several studies within the literature clearly define specific expectations related to having instructional design-related knowledge, skills, and abilities. Those who apply for instructional design or instructional design adjacent positions were expected to have knowledge of instructional design models, theories, and principles (Kang & Ritzhaupt, 2015; Klein & Kelly, 2018; Magruder et al., 2019; O'Malley, 2017; Thompson-Sellers & Calandra, 2012). However, as individuals become more experienced designers, employers look for IDLT professionals to apply the knowledge of instructional design-related frameworks, models, and theories beyond what they learned from a textbook, adapting them to frame their thinking about design and related challenges (Gray et al., 2015).

Non-Instructional Design & Learning Technology-Specific Expectations

Beirne and Romanoski (2018) identified common challenges for instructional designers around collaboration, as well as the lack of both time and resources, indicating a need for communication, organization, and aligning change with goals to gain buy-in. Similar to Beirne and Romanoski (2018), Magruder et al. (2019) explored the instructional design role, finding that often instructional designers need a number of important skills like collaboration, project management, problem-solving, editing, and relationship-building with a strong background in the theories and models that guide instructional design work. Nworie (2021) also sought to identify skills important to the instructional design profession, finding that oral and written communication skills were cited most often. Earlier, Thompson-Sellers and Calandra (2012) noted expectations from hiring managers for instructional designers to exhibit an ability to learn, listening skills, questioning, and analyzing abilities.

Technology-Related Expectations

While older studies did not widely indicate specific software tool knowledge and experience, Klein and Kelly (2018) discussed the importance of knowledge and experience with course authoring software such as Captivate, Lectora, Presenter, and Storyline. Giacumo et al. (2018) adapted the work of Ritzhaupt and Martin (2014), identifying the need for knowledge of educational authoring utilities, graphics, audio and video software, accessibility, and copyright skills as being necessary competencies for instructional designers. Nworie (2021), as well as Kang and Ritzhaupt (2015) and Magruder et al. (2019), in their studies also mentioned the importance of technical skills (e.g., Microsoft Office, learning management systems (LMSs), multimedia, productivity tools, and presentation software) that support IDLT work.

While many of these studies have been conducted over the past ten years, the world of IDLT continues to change rapidly. Therefore, it is important to continue studying the essence of roles and expectations to best prepare individuals for the field and support current professionals in the field in upskilling to be effective in their work (Nworie, 2021).

While useful for beginning to understand the field, many studies focused on limited sectors, where IDLT professionals work. For example, Thompson-Sellers and Calandra (2012) interviewed three instructional designers and all worked in a corporate setting. Similarly, Giacumo et al. (2018), Intentional Futures (2016), and Magruder et al. (2019) focused only on instructional designers in higher education. Nworie (2021) explored both higher education and corporate sectors but did not delve into nonprofit or K12.

Even in studies that looked at sectors more inclusively (i.e., Kang & Ritzhaupt, 2015; Klein & Kelly, 2018), limitations exist due to the evolving nature of IDLT field and the datedness of the data collection.

Given the rapid and continuing advancement of technologies and learning practices and the limitations of previous studies regarding sector focus, the purpose of this study is to explore current employer expectations of formal degree requirements, knowledge, skills, and abilities related to IDLT roles across organizations, schools, and institutions. Building from the literature, this study sought to answer the following research questions:

1. What is the frequency of knowledge, skills, abilities, and qualifications represented in IDLT position descriptions across the K12, higher education, nonprofit, and corporate sectors?
2. How do IDLT hiring managers across K12, higher education, nonprofit, and corporate sectors describe their expectations of IDLT professionals regarding knowledge, skills, abilities, and qualifications?

By answering these research questions, our research team aimed to support individuals interested in transitioning into IDLT, current IDLT professionals, and educational programs in better understanding employer expectations to effectively prepare for their work in the field.

METHOD

This study utilized a convergent mixed methods design to explore common knowledge, skills, abilities, and qualifications that employers across sectors expect from IDLT professionals. Position descriptions were reviewed, and interviews were conducted in a one-phased design, where results were merged to better understand the study's research questions (Creswell & Creswell, 2023).

Position Description Database Selection & Interview Participant Recruitment

Aligned with previous instructional designer position description work conducted by Nworie (2021) and the website's reputation for capturing position descriptions across workplace sectors, the research team selected Indeed as the position description database for this study.

After receiving Institutional Review Board approval, the first author shared the study's interview recruitment message on IDLT-related Facebook and LinkedIn groups. Additionally, the research team members shared the recruitment message personally on Facebook, LinkedIn, and Twitter (now X) to extend the reach of the recruitment message. Those interested in participating completed an interest survey, sharing their title, the sector their organization was in, if they held a supervisory role, how long they had been a supervisor and the size of their team(s).

The research team utilized purposive sampling to ensure that there were perspectives gathered from each of the study's focus sectors (i.e., K12, higher education, corporate, and non-profit) to answer the study's research questions most effectively. The first individuals who completed the interest form, had supervisory responsibilities within each sector, and completed the informed consent form were selected for participation. Ultimately, 12 (n=12) individuals who led instructional design efforts with their organizations were interviewed by the research team with three participants from each of the study's focus sectors: K12, higher education, corporate, and non-profit.

Table 1 provides further detail regarding each interviewee's sector, title, years in the field, and self-identified demographics as written in their own words.

Table 1. Interviewee participants

Pseudonym	Sector	Title	Years in field	Self-identified demographics
Alan	K12	Innovation coordinator for instructional technology	Over 15 years	White & male
Andrew	Higher education	Director, instructional design & assessment	10-14 years	White & male
Ann	Higher education	Director of instructional design & technology & Associate provost	Over 15 years	Caucasian & female
April	Non-profit	Senior manager, education & learning technology	5-9 years	White & female
Benjamin	Non-profit	Assistant vice president of learning	10-14 years	White non-Hispanic & male
Christopher	K12	Instructional technology coordinator	Over 15 years	Not specified
Donna	Corporate	Chief academic officer	Over 15 years	White & female
James	Corporate	Manager, learning & development	Over 15 years	White & male
Jennifer	K12	Technology integration specialist	0-4 years	Not specified
Leslie	Non-profit	Director of instructional technology & blended learning	10-14 years	White, Native American & female
Michael	Higher education	Executive director, Center for teaching & learning	Over 15 years	White & male
Tina	Corporate	Interim director, organizational development	0-4 years	White & female

Table 2. Position description sector representation

Degree	Frequency (n)	Percentage (%)
Corporate (including healthcare)	78	60.0
Higher education	31	23.8
Other (e.g., military, government, & research)	14	10.8
Non-profit	4	3.1
K12	3	2.3

Data Collection

The data collection for this study included two forms: position description data collection and semi-structured interviews.

Position description data collection

In May 2023, two searches of the database were conducted using two separate search phrases (search 1="instructional designer"; search 2="instructional technologist") and utilized the same process that included:

- (1) visiting indeed.com,
- (2) inputting the search phrase (i.e., "instructional designer" or "instructional technologist" and "United States") into the search parameters,
- (3) filtering to only include descriptions that were "full-time" posted over the "last 14 days", and
- (4) saving position descriptions as a PDF for analysis.

Over the 14-day period, the instructional designer search rendered 120 descriptions, and the instructional technologist search rendered an additional 10 descriptions, totaling 130 descriptions that contribute to this study's results. To prepare for analysis, the research team reviewed position descriptions and entered data into a spreadsheet to record each position description's sector, degree requirements, and degree field, as well as knowledge, skills, and abilities. **Table 2** depicts position description sector representation, with more than half (60.0% coming from the corporate sector and nearly a quarter (23.8%) coming from the higher education sector. Each member's work was reviewed by at least one additional team member to support accurate recording.

Semi-structured interviews

After obtaining informed consent, the research team conducted 12 (n=12) semi-structured interviews via Webex audio between July and September 2023. All interviews were approximately one hour long and recorded using the recording tool in Webex. Participants were asked to share context about their organization

and role before describing their team, including what knowledge, skills, and abilities they expected from their team members generally and in the hiring process. Interview questions included:

- Can you tell me about your organization? (Prompt questions included: What does your organization do? How would you describe your organization's ultimate goal?)
- What is your role within your organization? (Prompt questions included: What is your title? Who do you report to? How long have you been at your organization?)
- Describe the instructional design and/or learning technology team that you oversee (Prompt questions included: How does your team contribute to the larger organization? How many individuals are on your team? What are their titles, responsibilities, and duties? What knowledge, skills, and abilities do you expect them to have?)
- How might you describe your ability to hire and retain quality employees? (Prompt questions included: When hiring, what qualifications do you require? How has hiring gone for you recently? Are you finding qualified candidates for the positions you need? Why or why not?)

After conducting the interview, the researcher reflected and completed notes on the interview. Additionally, the researcher reviewed the transcript produced by Webex for accuracy to prepare for the data analysis phase.

Data Analysis

The research team analyzed the data from the position descriptions and the interviews separately before reviewing them together.

Position description analysis

To analyze the position description data, the lead author combined the data from each researcher into one data set and prepared the combined data set for SPSS. For this study, descriptive statistics were run on all the variables to provide an understanding of how frequently different requirements appeared.

With the focus of this study on employer expectations of IDLT professionals, the research team reviewed the knowledge, skills, and abilities in the position descriptions, further coding the items for analysis. Coding aligned with Gartner's (2023) definition that further describes knowledge as factual or procedural information that can be applied, skills as the capabilities required to perform tasks, and abilities as stable characteristics that include cognitive, sensory, and physical abilities.

Interview analysis

The research team utilized an adapted Creswell and Creswell's (2023) qualitative data analysis process that included:

- (1) organizing and preparing the data for analysis,
- (2) reading through all of the data,
- (3) coding the data,
- (4) identifying themes by grouping the codes,
- (5) developing a storyline interpretation by connecting the themes, and
- (6) interpreting the data.

Each research team member coded at least three transcripts and checked at least three additional transcripts done by another team member, interrogating the codes to ensure accuracy and fit.

Reviewing data together

After completing the position description and interview analyses, the findings were viewed together to better understand employer knowledge, skill, and ability expectations of IDLT professionals across sectors.

Table 3. Degree minimums

Degree	Frequency (n)	Percentage (%)
Bachelor's degree	96	73.8
Master's degree	16	12.3
No degree listed	10	7.7
Associate's degree	4	3.1
High school diploma	4	3.1

Table 4. Degree preferences

Degree	Frequency (n)	Percentage (%)
Master's degree	56	43.1
No degree listed	43	33.1
Bachelor's degree	23	17.7
Additional certifications	6	4.6
High school diploma	1	0.8
PhD	1	0.8

Table 5. Degree fields

Degree	Frequency (n)	Percentage (%)
Any	75	57.7
None listed	26	20.0
IDLT adjacent	22	16.9
IDLT specific	7	5.4

FINDINGS

In this section, we present findings that emerged from our collective analysis of the position description and interview data. Related to the study's research questions, four major themes emerged showcasing that employers wanted their team members to have:

- (1) a mix of a formal degree and experience,
- (2) an advanced understanding of instructional design theories, models, and frameworks,
- (3) a grasp of non-instructional design specific skills, and
- (4) familiarity with IDLT-related technologies.

Formalized Degree Requirements

Position descriptions generally included both minimum and preferred degree requirements. Analysis revealed the most commonly stated minimum degree requirement was a bachelor's degree (74.0%), followed by a master's degree (12.0%), as seen in [Table 3](#).

[Table 4](#) shows results that also revealed that the most commonly stated preferred degree requirement was a master's degree (43.1%). A small but noteworthy number of position descriptions indicated a need for additional certifications (4.6%) like Quality Matters/OSCQR, instructional design, or specific requirements for the particular position (e.g., technical writing and financial).

Position description analysis also revealed what focus areas were documented related to the type of degrees sought ([Table 5](#)). Employers were very open (57.7%), stating that any degree focuses were accepted (e.g., instructional design, education, curriculum, human resources, communication, etc.). Additionally, a large number (20.0%) did not list a specific degree area, and a good number (16.9%) indicated an instructional design adjacent focus, not naming instructional design specifically but listing options such as adult education, education, human resources, education technology, learning technologies, business, communication, behavioral sciences, and training development. A small number (5.4%) of position descriptions required degrees in IDLT-specific areas.

Interviewees expanded on this data, offering their perspectives on formal degree requirements for positions in which they were hiring. In some sectors (e.g., corporate), employers seemed to be going away from formal degree requirements and focusing more on experience and skills, as Donna mentioned:

We're not identifying a certain degree level for that as much as we're trying to find the people that just prefer that kind of work. So, we played to strengths and preferences, as much as we ask people to have a background in the doing and the education ...

However, more public entities faced challenges with larger human resource entities and related bureaucracy, which caused them to still focus on formal degree requirements. Michael, from the higher education sector, noted that for them, this usually included a master's degree in an instructional design or instructional design adjacent field:

... you need to have a master's degree and ideally in instructional design or something like that or something adjacent, and you've been doing the work. So, we have one person, for example, we've hired who does not have a formal ID background, but she's been doing course building and ID work for, like, five years ... and she could clearly demonstrate it ... our field is a weird one, you know, that pulls from all fields.

For all sectors, prior experience doing IDLT work was very important and, in many cases, expected to be showcased during the hiring process. Benjamin, from the nonprofit sector, agreed with the master's level credential and the need for experience:

For this organization, the way the field is right now, there's a much greater appetite for remote work, and we're a remote organization. Why I mentioned that is because I think we have the ability, with our reputation, to attract some very high-level candidates and one of the pieces would be having experience, and I think a master's level would be kind of the minimum. I think really having done the work would be a real critical piece ...

However, specific and deep instructional design experience was not necessarily a barrier for those new to the field, as many hiring managers talked about the importance of related experience. Alan, from the K12 sector, described that he looked for teaching experience and the ability to connect to the classroom:

I require them to have teaching experience, so they have a direct connection back to the classroom—they were a teacher, or they have to have a certification to have been in the classroom. I expect them to have a wealth of experiences.

Hiring managers also mentioned an intangible quality beyond formal degrees and experience that they looked for in candidates. Michael, from the higher education space, described this best as heart, passion, and dedication:

We hired everyone for their heart—their heart and passion for learning and student success and for students and for people who want to change the world. So, we specifically hired for heart—you know—capacity, competency, and attribute.

This was helpful, as interviewees like Leslie from the nonprofit sector shared that in the field:

... we have to lead with compassion and not judgment.

While interviewees described their views on formal degree requirements and their hopes for qualities like heart, they also went into more depth regarding the experience they were expecting, particularly in regard to specific instructional design knowledge, skills, and abilities.

Advanced Understanding of Instructional Design & Learning Technology Theories, Models, & Frameworks

Of the position descriptions analyzed, 56.2% asked for knowledge of instructional design frameworks, models, theories, and strategies, with various employers looking specifically for adult learning practices (33.1%), managing multiple experiences as part of a curriculum (17.7%), assessment practices (6.9%), quality support and improvement processes (6.9%), universal design for learning (UDL) (3.1%), Bloom's taxonomy (2.3%), and learning sciences (1.5%) (Table 6).

Table 6. IDLT knowledge

Instructional design knowledge	Frequency (n)	Percentage (%)
Instructional design frameworks, models, & strategies	73	56.2
Multiple modalities	44	33.8
Adult learning practices	43	33.1
Curriculum management	23	17.7
Effective research practices	16	12.3
Assessment practices	9	6.9
Quality support & improvement processes	9	6.9
UDL	4	3.1
Bloom's taxonomy	3	2.3
Learning sciences	2	1.5

Additionally, employers were interested in individuals having knowledge of how to leverage multiple modes (e.g., in-person, online, blended) for learning experiences (33.8%) and effective research practices for gathering learner/organizational needs and determining if changes, as well as interventions, are successful (12.3%).

While interviewees expected their instructional designers to understand learning theories, models, and frameworks, they wanted them to be able to move beyond them, applying them to their organizational context and adapting them for use in the real world. Interviewees shared that they are looking for IDLT professionals who have a solid base of knowledge and the ability to grow that knowledge with experience. Andrew, from the higher education sector, first talked about the need for their instructional designers to have foundational knowledge in learning theories, models, and frameworks:

... the general knowledge and expecting them to know about learning theories—expecting them to know some of the things that we would consider foundational like Bloom's taxonomy and things we consider ourselves proponents of, like backward design.

But employers also wanted their designers to actively move beyond the general knowledge, to actively and quickly deepen their learning and apply primary design knowledge to their work and partnerships with their team and subject matter experts (SMEs), as Andrew continued to explain:

... an instructional designer may not know about community of inquiry, but if they do not, then we want them to understand it very quickly. So, they need to be able to have the capacity to get their heads around learning theory as part of it.

Beyond the knowledge of frameworks, models, and strategies, interviewees wanted their instructional designers to apply them in an advanced way to meet their learner and organizational needs. April, from the nonprofit sector, started to explain this as IDLT professionals being too focused on frameworks:

God knows why you're obsessed with ADDIE, because yeah, sure, you should probably follow that instructional design process behind your work. Obviously, those elements are all important, but like, why ... it's some of the foundational stuff that I like, we're moving away from, and they're getting way too focused on ...

Michael, from the higher education sector, described this advanced knowledge, application, and use in connection to working with instructional designers new to the field and the maturation process as individuals gain more experience in the field:

When we get someone fresh out of ID school, they're like cute and green, and they have all their processes and frameworks and models that they use, and I use ADDIE model of course, we all do, but these are just models. As people grow in the field, they assimilate, and we just assimilate, right? We learn and grow and synthesize things. What formal models do I use or frameworks? What do I use? I dread when people ask me that because I'm like all of them. I do not know. I do not think that way anymore, and I think that's, where, as people mature in the field, they're no longer like I need

Gagne's nine events ... we're past that now, and those are helpful to grow and build, and to get us to a level of understanding.

While this advanced knowledge, application, and use can provide instructional designers with confidence that empowers them to advocate for their ideas, it does not happen without proper support and scaffolding. Andrew, from the higher education sector, gave an example of this on his team:

... with our course building, instructional design team, their manager asked them to come up with a pitch around different topics or things that they thought we should be solving, and it was like pulling teeth from them. She had to work back more like, what do you mean?

Interviewees also spoke more generally about the increase in expectations of instructional designers in the field. Andrew went on to speak to this more, sharing about this new level of expectation across the field that has shifted over the years:

You start to expect more sophisticated things from your candidates because I think the nature of the field has started to lift. Where, you know, when I started, it was like, well, if you can work your way around Blackboard Vista, then you're three steps ahead of faculty, and that's good enough. I think the level of sophistication is kind of rising because where the field is moving is kind of to a more sophisticated, more complicated space. I think there's been a bit more of a question on return on investment. Like, what's the value of this? It's not enough that you built an interactive object, but did the building and the creation of that object make sense in the learning context in which it was used?

This advanced and more sophisticated nature was important, as interviewees noted, to prepare their instructional designers as they did deeper work within their organizations. Donna, from the corporate sector, mentioned that these skills can help as an organization grows, leaving an instructional designer sometimes wearing multiple hats depending on this maturation:

As we've grown as an organization, we've built out all these individual units that serve certain purposes within the design cycle. We no longer are looking for one person to have every skill or ability. And so, the KSAs [knowledge, skills, and abilities] have changed over time. I think when we started the company, we very much had the learning architect building and copy editing also. You know, there was a lot of wearing multiple hats ...

Similarly, this advanced knowledge and application supports instructional designers in leveraging different frameworks, models, strategies, and modes when most appropriate. However, this leveraging was not always possible due to the lack of experience and knowledge. For example, Alan, from the K12 sector, discussed a lack of depth around online learning:

I wish I had someone who had a deeper background in online learning on my team. While they all have varying degrees of experience with that, to have somebody that had a degree ... who already kind of had gone down that path and understood.

This depth not only came from educational background, but also experience. Donna, from the corporate sector, expanded on the type of advanced background and experience that were expected, focusing on accessibility to create effective learning experiences:

But there's a lot that goes into copyright clearance, also ensuring that everything is ADA compliant—accessible from captions to text-based alternative transcription to the table cell headers meeting accessibility components to PDFs that are accessible—that must go into making sure that a course is ready not for students, but for all students.

Donna also explained that this advanced knowledge goes beyond the design process but into a continuous improvement process that leverages industry standard tools:

Quality review, depending on the institution, we'll use QM, we'll use OSCQR rubric, Peralta in many cases, because of the equity component there. So, our quality review team will do the quality review of the course leveraging the power of whichever rubric the institution has subscribed to.

While interviewees shared their expectations regarding specific instructional design knowledge, they also spoke more broadly about the need for instructional designers in their organization, school/district, or institution to have non-specific instructional design skills (e.g., managing multiple projects, seeing a larger picture of where one's work fits).

Non-Instructional Design & Learning Technology-Specific Expectations

IDLT leaders consistently shared that they needed individuals in IDLT roles to be relationship-builders ready to collaborate on complex projects and lead the way with clear communication and attention to detail, being creative in solving problems as they arise in flexible ways for diverse learners and their needs. Interviewees also shared that they needed IDLTs who were solid in project management and could see the bigger organizational picture, aligning larger-level strategic goals with their projects and future planning.

Position description analysis revealed a high interest in individuals having written (71.5%) and oral (66.2%) communication skills, as well as skills in collaboration (45.4%), organization (36.2%), problem-solving (32.3%), and multitasking (32.3%). Employers also expected applicants to be able to manage projects (29.2%), work independently (29.2%), and present (28.5%). Attention to detail (23.8%), ability to work with diverse audiences (20.8%), understanding needs (17.7%), adaptability (16.2%), ability to work in fast-paced environments (14.6%), and change management (14.6%) were also mentioned frequently in the position descriptions reviewed. Aspects from interviews (e.g., quick learners, working in multiple modes like synchronous and passion) were also included in a few position descriptions ([Table 7](#)).

IDLT leaders consistently shared that they needed individuals in IDLT roles to have many of the items that were included in the position descriptions. Andrew, from the higher education sector, illustrated this by mentioning the importance of being able to work independently, manage one's time, and communicate effectively, particularly in typical instructional design environments:

I think with the shift to remote, the ability to work independently, the ability to pace your time, and the ability to communicate effectively online has become more important over the last few years since it's something we're asking as part of interview questions.

Relatedly, hiring managers emphasized soft skills like communication and, as Benjamin from the nonprofit sector noted, attention to detail as being crucial for developing relationships within their teams and SMEs:

I think really being able to work with people is so important and what I see as being a real skill for all of them—not just within the organization, but maintaining good relationships with the SMEs, with our facilitators, and with our participants. I would also add another, maybe it's a soft skill, and this is something that everyone always puts on their cover letter, which is attention to detail, but I think it's just really critical as well.

Andrew, from the higher education space, spoke more to the importance of soft skills, focusing on how they empower instructional designers to be successful:

... you get into the soft skills, which are being able to work with faculty, being able to understand your support role within an institution, being able to understand the person across the table ..., where they're coming from, being able to negotiate, tact, diplomacy, reading the room, reading the temperature in the room, being able to manage those things I think is a critical part of all instructional designer levels.

Interviewees shared that they needed IDLTs who were solid in project management and could see the bigger organizational picture, aligning larger-level strategic goals with their projects, the team's projects, and future planning. Within this, Andrew (higher education) described the need for "broad scope, project management... [and] the ability to manage tasks." Donna, from the corporate sector, gave an example of

Table 7. Non-IDLT specific knowledge

Non-instructional design knowledge	Frequency (n)	Percentage (%)
Written communication	93	71.5
Oral communication	86	66.2
Collaboration	59	45.4
Organization	47	36.2
Problem-solving	42	32.3
Multitasking	42	32.3
Working independently	38	29.2
Managing projects	38	29.2
Presenting	37	28.5
Attention to detail	31	23.8
Working with diverse audiences	27	20.8
Understanding needs	23	17.7
Adaptability	21	16.2
Working in fast-paced environments	19	14.6
Managing change	19	14.6
Customer service	15	11.5
Leadership	14	10.8
Growth mindset	11	8.5
Synchronous interaction	9	6.9
Critical thinking	8	6.2
Gaining buy-in	8	6.2
Professionalism	7	5.4
Listening	4	3.1
Quick learner	3	2.3
Strategic planning	3	2.3
Passion	2	1.5

Table 8. IDLT-related technology familiarity

Technologies	Frequency (n)	Percentage (%)
LMS	38	29.2
Video	27	20.8
Learning technologies	25	19.2
Microsoft Suite	23	17.7
Articulate	21	16.2
Adobe Creative Suite	20	15.4
HTML	6	4.6
SharePoint	3	2.3

project management in practice, describing how their senior learning architect needed a granular and big-picture view all at once:

... the senior learning architect needs to be keeping an eye on every course for that entire program and ensuring there's consistency while multiple learning architects might be working with multiple faculties. So, it's a more senior role having built thousands of courses.

While Donna indicated this was more of a senior role expectation, Michael, from the higher education sector, shared that he was also, more broadly, "looking for systems thinkers and ecosystem builders." As bigger-picture thinkers, instructional designers are able to better leverage available technologies to meet learner and organizational needs.

Technology-Related Expectations

While employers tended not to name specific technology familiarity, position description analysis revealed that many IDLT employers were looking for applicants who have broad skills to produce learning experiences (36.0%). In this production space, experience with an LMS (29.0%), video (21.0%), Microsoft Suite (18.0%), Articulate (16.0%), and Adobe Creative Suite (15.0%) were mentioned most frequently. A small number of employers (5.0%) were looking for applicants to have HTML programming skills ([Table 8](#)).

While leaders described different team sizes and compositions in their interviews, many mentioned the importance of experience working with an LMS across roles, as much of their work happened in that space. Ann, from the higher education sector that all her roles “are heavily involved in LMS ... [and] using a variety of technology.” Andrew, from the higher education space, agreed with this, stating that they were “not asking for Flash experience, but placing more emphasis on the eLearning tools and experience with LMS ...” LMS (and related learning technology tools) experience was not only expected in the higher education space but was also mentioned across sectors. In K12, Jennifer and Alan shared the importance of having a deep understanding of Google. In the nonprofit space, Benjamin described that one of his instructional designers served as an LMS administrator as part of their role, which even included leading an LMS transition:

We recently moved from Moodle to Canvas, and she was the project lead for that, and is continuing that work because we have more work to do in that area. We have all of our offerings in Canvas, but now we’re entering into phase 2, which is making some improvements to the offerings both visually and from an assessment and activity perspective as well. So, she is sort of like Canvas person.

Donna, from the corporate sector, concurred with the importance of LMS and related tool knowledge with the other interviewees across sectors, but expanding it to include video, mentioning that in regards to experience, they “keep it very heterogeneous with the mix of LMSs, 3rd party tools, and video things.”

Video experience was mentioned by many of the interviewees in the corporate, nonprofit, and higher education sectors. James, from the corporate sector, described an increase in expectation of their team’s work in regard to the quality of videos and experiences, but the timelines had not necessarily been extended to accommodate this:

Production quality has definitely gone up, and we expect it to be higher, and then frankly, the timelines are not always realistic to the production quality interest that folks have ...

However, some interviewees shared that they did not necessarily have video skills on their team but wished they did, as Michael from the higher education sector described:

... the thing that probably the biggest thing we need is what I might call an instructional media designer or an instructional designer with a media background. I know they exist. They’re just harder to find. So, I want someone who’s like all into video in particular ... so, the one gaping hole that we have is someone who can help more with pre-production ... when I say pre-production, I mean scripting, storyboarding, getting people’s ideas, and turning ideas into something that would be actually engaging. You know, talking someone out of a 75-minute lecture video and then doing micro-lectures or using the whiteboard or whatever it might be that actually aligns with an outcome and student need as opposed to, like, I just want to sprinkle some shiny around my course and that’s, where we could get, that’s, where we would need an ID to do that.

This skill was also more challenging on smaller teams, where they were responsible for creating the entirety of the learning experience. Leslie, from the nonprofit sector, explained:

So, I create everything. I create all student-facing slide decks, lesson plans, handouts, articles, and sometimes even videos.

April, from the nonprofit sector, went on to further describe that she often needed to leverage skills that she did not have to use before and needed to learn them:

I’ve had to do Captivate projects, Articulate projects, and random video editing and stuff that I never had to do before ... [I’ve had to] sit down and watch a couple of YouTube videos, play around—it’s slow, but you learn it, whereas, like the actual foundational knowledge of learning and development, it’s honestly what makes good content, not your ability to just hit buttons on Captivate.

April went on to expand on this and explain that instructional design roles often need to know a lot of different technologies and related skills, but in the end, it is not about what is flashy, but what makes for good learning:

Okay, maybe you should know a little coding, and maybe you should know a little graphic design, maybe you should know a little video editing, and then, you know, basically, be a magician and it kind of runs away from the fact that learning is good learning, and it does not have to be flashy ...

However, hiring managers did not always require skills with particular technologies. Andrew, from the higher education sector, shared that while he would like his instructional designers to have skills with technologies, he did not require them:

... in terms of skills, we look at things like HTML and CSS. It helps if they know an eLearning tool, like Storyline, Captivate things like that, but it's not strictly required. There are a few times, where we've just taken people as is. One of my recent hires does not have a lot of HTML experience, but they did have some eLearning tool experience ...

Familiarity with IDLT-related technologies, as well as degree requirements, advanced understanding of IDLT-related concepts, and non-IDLT specific skills that were shared in position descriptions and mentioned in interviews leave a number of key implications for instructional designer and learning technology professionals, IDLT leaders, and educational programs preparing future IDLT professionals.

DISCUSSION

Through this study, we aimed to better understand the knowledge, skills, abilities, and qualifications represented in IDLT-related position descriptions and among IDLT hiring managers across the K12, higher education, nonprofit, and corporate sectors. The findings supported and added to the previous literature related to employer expectations of formal degree requirements, IDLT and non-IDLT-specific skills, and technology familiarity.

Formal Degree Requirements

This study found that the minimum degree requirement for IDLT-related positions was most often stated as being a bachelor's degree. However, position descriptions often included a master's degree as being preferred. Very few position descriptions required a degree in instructional design, but rather listed no field, indicated any field was accepted, or were looking for a field that was connected to instructional design (e.g., education). These findings were consistent with the previous literature that identified bachelor's degree requirements as the most common, while a master's degree in a related field and experience doing IDLT-related work being preferred (Intentional Futures, 2016; Kang & Ritzhaupt, 2015; Klein & Kelly, 2018; Nworie, 2021). Extending from previous literature, interviewees shared that while master's degrees were often what they were looking for, they wanted someone to have experience that connected to the work they would be doing, and some even mentioned that they wanted to move away from formal degree requirements but experienced bureaucracy that kept the requirements in place. While instructional design has been around formally since World War II (Reiser, 2002, as cited in North et al., 2021) and continues to evolve, it is likely the bureaucracy that keeps degree requirements in place will continue. It is also likely that the field will continue to professionalize with more and more degree programs becoming available, which may create a situation, where employers may ask for specific instructional design bachelor's and master's degrees in the future.

Instructional Design & Learning Technology-Specific Expectations

More than degrees, interviewees spoke about the importance of experience, and data from the position descriptions helped to illuminate which IDLT-specific knowledge, skills, and abilities were most sought after by IDLT employers. This study found that over half of the position descriptions that were reviewed wanted candidates who had knowledge of instructional design-related frameworks, models, and strategies. Interviewees shared that while this foundational knowledge was crucial, so was moving beyond textbook definitions and lock-step processes to be adaptable in using multiple (and various pieces of them)

frameworks, models, theories, and strategies to meet the needs of their organizations and learners. This is similar to prior studies that showcased the importance of understanding instructional design models, theories, and principles (Kang & Ritzhaupt, 2015; Klein & Kelly, 2018; O'Malley, 2017; Thompson-Sellers & Calandra, 2012), as well as a need to move beyond those textbook definitions and processes (Gray et al., 2015). Enhancing the depth of the previous literature, interviewees shared that their IDLT staff members, who were newer to the field, often struggled with this and needed support in growing their skills. Additionally, what was truly unique about this study's findings, extending the work of prior studies and speaking to the need to collect data frequently to account for the evolving nature of learning across sectors, were the increased expectations around skills and experience designing and facilitating multiple modalities of learning. Moreover, there was an emergence of previously unmentioned theories, models, frameworks, and strategies than in previous studies (e.g., UDL, learning sciences, and quality improvement processes).

Non-Instructional Design & Learning Technology-Specific Expectations

While employers knew that IDLT-specific skills and experiences were important for success in their IDLT staff roles, position description data and interviewee perspectives were clear that broad-level non-IDLT-specific skills and experiences were expected and crucial for success. Similar to previous literature that discussed the importance of communication, collaboration, organization, aligning goals to gain buy-in, project management, problem-solving, relationship-building, ability to learn, and analysis (Magruder et al., 2019; Nworie, 2021; Thompson-Sellers & Calandra, 2012) for those in IDLT roles, our study found similar results with skills like written and oral communication, collaboration, organization, problem-solving, project management, and managing change were cited in many position descriptions. However, prior literature did not speak to items that were listed often, like multitasking, the ability to work independently, working with diverse audiences, adaptability, and the ability to work in fast-paced environments. These findings extend the work of previous studies, coalescing in the current reality of IDLT, where professionals are being asked to do more across their organizations and lead learning initiatives, with much of their work necessitating advanced soft skills that work to leverage relationships to move technology and learning big-picture change forward.

Technology-Related Expectations

Recent studies indicated needs around authoring software (e.g., Captivate, Storyline), as well as additional technologies (e., video, multimedia, LMS, and Microsoft Suite) and the ability to use them in a way that was accessible and met copyright considerations (Giacumo et al., 2018; Klein & Kelly, 2018; Nworie, 2021). Similar to previous studies, our study saw expectations for IDLT professionals to be able to use an LMS, video, Microsoft Suite, and authoring tools (e.g., Articulate, Adobe Creative Suite, and HTML). However, this study extends previous literature, acknowledging emerging employer expectations for knowledge and skills with learning technologies that work with and outside of LMS to meet the needs of an organization and its learners. Interviewees shared that video experience and video production quality expectations are on the rise, making it an important skill for their teams to grow around.

LIMITATIONS

This study had a number of limitations. First, this study lacked a diverse sample in regard to the position descriptions (i.e., relatively few position descriptions from the K12 and nonprofit sectors) and interview participants (i.e., many interviewees self-identified as white or Caucasian). Thus, future researchers might identify additional job databases across the different sectors, as well as enhance interview recruitment and selection processes to promote diversity in future data samples. With a more diverse data set, advanced data analysis procedures may contribute to a better understanding of differences across sectors. Related to this, an expansion of titles beyond instructional designer or instructional technologist would likely render more results, but titling of IDLT roles is complex, with organizations often naming their IDLT positions to relate and exist within their culture instead of a common name like instructional designer or instructional technologist. Second, this study did not analyze position description data for different leveling (e.g., entry-level positions may have different requirements than advanced leadership positions). As future researchers enter the conversation regarding hiring IDLT managers' expectations of new, current, and future staff, it is recommended that they analyze position descriptions for the level of position to reveal differences in formal

degree requirements, as well as knowledge, skills, and abilities that are expected. While this study had a relatively small interview sample (n=12) of IDLT leaders, the research team implemented measures to support the reliability in regards to approach and validity to support the accuracy of the findings. These measures included checking transcripts for errors, reviewing one another's analysis to reduce coding drift, sharing theme and topic overviews with interviewees for feedback, and reviewing the data sources (i.e., position descriptions and interview transcripts) together. However, future researchers might gather more perspectives and include the perspectives of IDLT staff members in addition to IDLT employers to further enhance the understanding of the evolving field. Finally, as technology is continually evolving, this study was conducted as artificial intelligence (AI) was emerging. As future research is conducted, it will be important to better understand the impact of AI and related expectations for IDLT professionals.

While this study was limited in scope, it provides directions for individuals transitioning into IDLT field, current IDLT professionals, and educational programs to further explore as we all keep a watchful eye on the ever-evolving field of IDLT.

CONCLUSIONS

As individuals transition into IDLT field, current IDLT professionals and leaders plan for career advancement, and IDLT-related educational programs prepare for their futures, it will be important for them to consider these results, as well as continuously examine how the field is evolving and how emerging technologies and learning practices will impact what they do and how they do it.

Recommendations for Career Starters & Changers

Individuals starting in and transitioning into the field from other careers should consider certificates and programs that help them to meet the preferred degree and skill requirements that positions they would like to someday hold iterate in their position descriptions. More than a specific degree in instructional design, career changers should consider certificates and programs that have courses and experiences that help them not only learn the specific frameworks, theories, models, and strategies of instructional design but to move beyond them, adapting and applying them in various ways to differing real-world multimodal IDLT experiences. Additionally, career starters and changers should pursue experiences, certificates, and programs that also support their growth of non-specific-IDLT skills (e.g., communication, collaboration, project management, relationship-building, change management, working independently and with diverse audiences) and technologies (e.g., video creation, course authoring tools, LMS) that will help support their future IDLT work. Finally, as they apply for positions, career changers might consider how they can tell their story in their application materials (e.g., cover letter, portfolio) of how they have done similar work or work to gain experience through internships or volunteer work—clearly connecting an instructional problem with a solution and showcasing the skills the employer is looking for to fill their team.

Recommendations for Current Instructional Design & Learning Technology Professionals

Current IDLT professionals might consider different ways they might work with their leadership to grow professionally as the field develops in regard to key skills (e.g., moving beyond textbook definitions of IDLT-related theories, frameworks, models, and strategies, building relationships across an organization to facilitate change) and technologies (e.g., video and course authoring tools) as they emerge and become relevant to their organization. Additionally, it is important that current IDLT professionals stay abreast of emerging practices (e.g., leveraging multimodal strategies for learning, UDL and learning sciences to meet the needs of diverse audiences). Finally, current IDLT professionals should also prepare themselves for not only design work but also redesign work that considers quality improvement processes that enhance original design work.

As educational certificates and programs are still growing, leaders in supervisory positions should continue to include broad degree fields as it relates to their master's degree requirements as they are hiring for new IDLT professionals to allow for candidates who have related degrees and experience that would be good fits for their team to make it into their hiring pool. It will also be necessary for IDLT leaders to have a keen understanding of their school, institution, or organization, as well as the larger field, to determine IDLT-

specific (e.g., advanced application of IDLT-related frameworks, models, theories, and strategies, designing multimodally, leveraging video and course authoring tools), non-IDLT-specific (e.g., collaborating with good communication and project management techniques with diverse audiences, applying organizational and problem-solving strategies while being independent and multitasking in a fast-paced environment that necessitates being detail-oriented), and technology skills (e.g., LMS, course authoring tools, video production tools) when hiring and growing those already within their team. Finally, as leaders work with their teams, they should ensure they are modeling, providing mentorship, and investing in continuous learning through professional development to grow their staff and their teams to meet the evolving needs of their school, institution, organization, and field by being big-picture, system-thinkers, and connectors.

Recommendations for Educational Programs

Educational programs, preparing the next generation IDLT workforce, should consider course and programmatic design and redesign efforts to ensure students are leaving their programs with the skills employers expect them to have to be successful in their organizations, schools, or institutions. Programs should consider student learning outcomes that support students in gaining a solid foundation in IDLT-specific skills, non-IDLT-specific skills, and technologies that support IDLT work by having students engage in real-world experience or scenarios. As educational programs design and redesign their courses and programs, they might focus on ensuring that students leave their program being able to design effective multimodal learning experiences. Additionally, they might consider integrating learning the technology tools (e.g., LMS, video production, and course authoring tools) into the curriculum to assist students in not having only the frameworks, theories, models, and strategies of instructional design but also the tools to produce engaging learning experiences they design. Finally, educational programs should consider how they support students in gaining key non-IDLT-specific skills that employers are expecting (e.g., communication, collaboration, organization, problem-solving, multi-tasking, working independently, managing projects, presenting, attention to detail, working with diverse audiences) as a part of their curriculum.

Across sectors, the field of IDLT will continue to evolve due to emerging technologies and practices, which will create ever-changing expectations of skills that researchers, career changers, current IDLT professionals, and educational programs will need to monitor and prepare to address. While this study provided a number of considerations across these groups, it will be important for future research to continue this work to best support the field as it continues to evolve. The research presented in this paper helps establish a foundation upon which this future work can effectively build, assessing students, programs, and employers along the way.

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