

A Study on the Services Motivating Instructional Designers in Higher Education to Engage in Professional Associations

Implications for Research and Practice

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The purpose of this research was to identify the professional association services relevant to instructional design professionals working in institutions of higher education. A conceptual framework connecting professional association services to the existing research on the leadership, career development, and networking of instructional designers in higher education is provided. Based on this conceptual framework and an existing instrument, we provide the design, development, and adjustment of a survey to measure professional association services relevant to instructional designers in higher education; and provide the preliminary validity and reliability evidence of this survey on an administration with $N = 217$ instructional designers working in higher education. We titled this survey the Instructional Designer in Higher Education Professional Association Survey (IDHEPAS). The cross-sectional data were analyzed using exploratory factor analysis, descriptive statistics, internal consistency reliability, and correlation analyses. The analyses resulted in eight internally consistent factors explaining approximately 71% of the variability in these data: 1) Professional networking services, 2) Growth and advocacy services, 3) Professional communication services, 4) Ancillary discount services, 5) Leadership and mentoring services, 6) Relevant literature services, 7) Training and credentialing services, and 8) Vendor and continuing education services. These findings are discussed in detail, and recommendations for future research and practice are provided. The IDHEPAS was found to be a sound measurement tool for the stated purpose.

Instructional design is a field and area of research grounded in facilitating learning and improving performance for all types of learners. Regardless of industry or context, instructional designers are expected to perform a variety of tasks, leading to the development of both instructional and non-instructional solutions, while working on and delivering the outcomes of a project (Cox & Osguthorpe, 2003; Kenny et al., 2005; Sugar, 2014). There is a growing need for instructional designers in higher education as more institutions of higher education (e.g., universities or community colleges) are expanding their course offerings using blended and online learning platforms (Allen & Seaman, 2014). Higher education institutions are recognizing the need for faculty to be effectively trained and supported in their instructional design and technology integration efforts (Bickerstaff & Cormier, 2015; Chiasson et al., 2015; Elliott et al., 2015).

Several studies have been conducted to identify competencies and roles required of instructional designers in the past several years (e.g., Daniels et al., 2012; Ritzhaupt & Kumar, 2015; Ritzhaupt & Martin, 2014; Ritzhaupt, Martin et al., 2018). Additionally, these research studies have explored how these competencies and roles are being applied across a variety of contexts (e.g. corporate, government, K-12, healthcare, higher education) (Christensen & Osguthorpe, 2004; Cox & Osguthorpe, 2003; Kenny et al., 2005; Ritzhaupt & Kumar, 2015; Rowland, 1992; Wedman & Tessmer, 1993). Additional research studies have been conducted to explore the challenges instructional designers encounter while working on authentic projects involving multiple stakeholders, constraints, and objectives (Gray et al. 2015; Hoard et al., 2017; Stefaniak et al., 2018).

Taking into account the role that instructional designers are serving in higher education (Kumar & Ritzhaupt, 2017; Litchfield, 2017; Ritzhaupt & Kumar, 2015) and the challenges that many encounter while working on instructional design tasks, it is important that the necessary resources, guidance, and support are provided to instructional designers, particularly in the context of higher education, to ensure their professional learning, networking, and career growth. In particular, professional associations are available to professionals in a wide range of fields (e.g., accounting, project management, information technology, etc.) to assist with these professional needs, and to engage members in the profession. Professional associations provide a wide-range of services to its members for their professional networking, leadership, and career development, including specific things like publishing journals, continuing education, certification, hosting conferences, and developing standards and the body of knowledge in a field (DeLeskey, 2003). As professional associations are typically volunteer associations, these groups are limited in the amount of time and resources they can allocate their constituents.

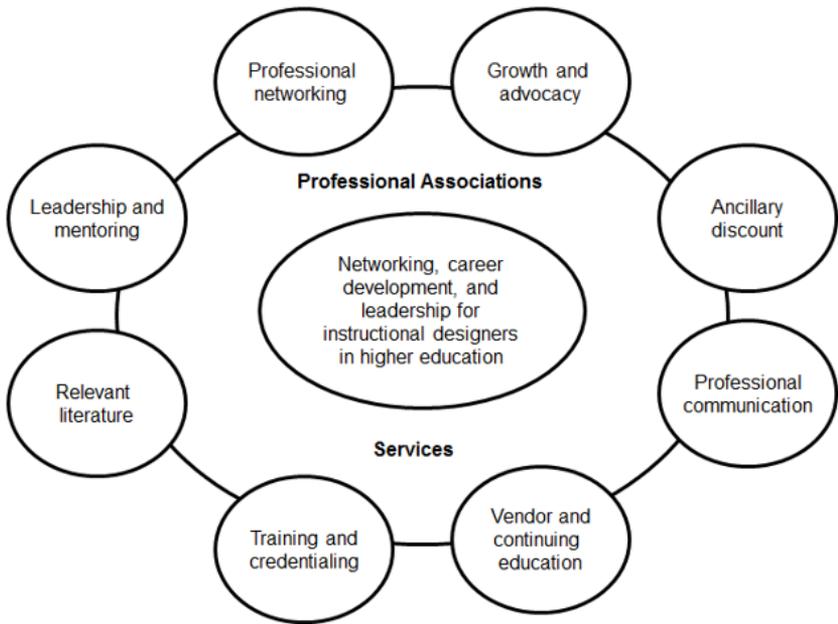
Instructional designers in higher education are emerging professionals found in all types (e.g., private versus public, university versus community college, etc.) of institutions of higher education, and often have evolving roles and responsibilities not always clearly defined by the job title (Ritzhaupt & Kumar, 2015). Other terminologies that refer to the instructional designer include faculty developer (Diamond, 2002), instructional technology consultant (van Leusen, 2013), and more job titles. Unfortunately, the job titles of those individuals serving as instructional designers are not always clear or consistent across organizations and contexts (Kang & Ritzhaupt, 2015). These instructional design professionals offer many value-added activities to institutions of higher education (their employers) ranging from course design and development to supporting faculty in delivering online courses to facilitating meaningful workshops to conducting summative evaluation and research (Kumar & Ritzhaupt, 2017). Instructional designers in higher education are often in charge of developing faculty pedagogical and technological skills (Hosler, 2013; Nworie, 2009). While several professional associations (e.g., Online Learning Consortium or EDUCAUSE) are available to instructional designers in higher education, these nascent professionals have professional needs that have not been systematically studied and matched to the services provided by professional associations. Instructional designers in higher education must possess a variety of knowledge skills, including learning theories and instructional design models, soft skills, the capacity to learn independently, information and communication technology skills, project management skills, and superior written and oral communication skills (Ritzhaupt & Kumar, 2015). Professional associations have an obligation to provide the necessary services to assist with the professional networking, leadership, and career development of these professionals.

Conceptual Framework

The conceptual framework guiding this study involved taking a closer look at how instructional design professionals in higher education leverage their memberships in professional associations to enhance their leadership, career development, and networking opportunities. This framework was built upon existing research exploring the services that influence computing professionals to join professional associations (Umapathy et al., 2010), and long history and role of professional associations in any field of endeavor (e.g., DeLeskey, 2003; Glendenning & Gordon, 1997). Figure 1 provides a visualization of this conceptual framework in relation to the professional association services, and concepts of professional leadership, career development, and networking of instructional designers in higher education.

Figure 1

Conceptual Framework of Professional Association Services



Leadership

Instructional designers in higher education perform many activities outside the confines of the application of instructional design models, emerging technologies, and learning theories. Some activities include serving as project managers or change agents in their organization, rolling out new innovations, creating budgets, managing schedules, mentoring faculty and other personnel, and conducting professional meetings either through meeting with diverse project teams or with supervisors and clients (Kenny et al., 2005). Due to the numerous tasks and roles instructional designers hold, it can be expected that instructional designers seek to improve their leadership skills through leadership, mentoring, professional growth, and advocacy activities in their organizations and beyond (e.g., general public). Because of the multiple roles of instructional designers in higher education, such as project management and supervision of teams, instructional designers seek to become involved in leadership, community building, and

advancement of profession (Gruen et al., 2000). Professional associations can offer various leadership activities for its members. Members may be seeking broader impact of the profession therefore seek leadership positions in special interest groups, committees, or task forces (Dodgen et al., 2003; Ritzhaupt et al., 2012) or even general leadership positions in the association at large (Lin et al., 2003).

Professional associations provide multiple ways to serve in a leadership capacity beyond the boundaries of the professional association. For instance, instructional designers working in higher education can provide mentoring to students in academic programs or other professionals to influence, direct, and develop individuals who want to enhance their careers. It also serves those who want to advance their careers by learning from senior members of the community on any type of professional issues, including legal and ethical matters (Glendenning & Gordon, 1997). Professional associations can sponsor mentoring through community engagement and events. One example of this type of event is AECT's Design and Development Instructional Design Competition. As Resig et al. (2017) stated, the competition developed their project management skills, gave access to a senior member for mentorship and guidance, and engaged them deeply within the professional associations' membership. Professional association members can impact through research and practice by developing expertise and engaging in other professional association services like publishing in peer-reviewed journals, presenting at conferences, and receiving professional recognition or awards for their efforts. Leadership professional association services and opportunities are essential to instructional designers in higher education.

Career Development

Professional associations can help in the career development of instructional designers specific to the higher education sector. As noted by Larson and Lockee (2009), instructional designers that work in higher education have different competencies and skill requirements than instructional designers who work in other sectors. The problems instructional designers face in higher education often concerned with instructional improvement, instructional objectives, sequence of learning, instructional methods, assessment, and evaluation (Terlouw, 1997). However, the career of an instructional designer in higher education is not limited to just instructional activities alone. Instructional designers have to be multifunctional, where they have both instructional and technology competencies to support all faculty, students, staff, including both technical and social responsibilities on the job (Ritzhaupt & Kumar, 2015). Instructional designers are expected to demonstrate competency in tools (i.e. the use, development, programming, and/or management of tools), soft-skills (i.e., communication,

collaboration, customer service, leadership, decision-making), research and data analysis, evaluation, and project management (Christensen & Osguthorpe, 2004; Cox & Osguthorpe, 2003; Kang & Ritzhaupt, 2015; Kumar & Ritzhaupt, 2017; Ritzhaupt & Kumar, 2015).

Career growth and professional development in all these aspects is needed for instructional designers to stay current with the trends and adapt to the changing-nature of educational technologies. Instructional designers claim that while some of the competency areas stated previously were learned from their academic programs, much more is learned on the job and from their professional experiences (Ritzhaupt & Kumar, 2015). Many instructional designers come from a variety of backgrounds and their competency areas vary by education level and setting/industry (Byun, 2000; Christensen & Osguthorpe, 2004). Researchers have found that instructional designers have worked in other professions and held positions unrelated to instructional design before taking on their current position as instructional designer (Ritzhaupt & Kumar, 2015). Instructional designers in higher education differ from instructional designers in business and industry in that several have some teaching experience in K-12 or higher education to better understand the needs of students and faculty (Kumar & Ritzhaupt, 2017; Ritzhaupt & Kumar, 2015). It is no surprise that many instructional designers in higher education have advanced/masters degrees.

Kumar and Ritzhaupt (2017) noted that instructional designers who participated in professional development, professional communities (i.e., social media), conferences, workshops, and professional courses found these activities helpful in fulfilling their roles and responsibilities. Professional associations such as the ATD, AECT, and ISPI have created formal standards, which influence both the development of academic curricula for instructional design and the definition the professional requirements and descriptions for instructional design-related job roles and responsibilities. Professional associations can provide continuing education, professional development, and credentialing services to members to support their career development. ISPI and ATD have developed the professional certifications known as the Certified Performance Technologist (CPT) and Certified Professional in Learning and Performance (CPLP), respectively. However, these certifications may not be appropriate for the unique context of instructional designers in higher education.

To recruit and retain professionals in the instructional design field, professional associations can utilize various resources such as listservs, social media, conference proceedings, member directories, discussion forums, journals, white papers, and magazines to provide additional avenues for career development and

to keep instructional designers up-to-date to recent research or trends. Additionally, these professional associations can aggregate job titles and job announcements from instructional design and technology job boards to provide access to challenging career opportunities (e.g., Chronicle of Higher Education, HigherEdJobs) to help instructional designers become aware of, and find employment that better suits their needs and professional expertise (Umapathy & Ritzhaupt, 2011). Professional associations can also organize career events and job fairs at conferences (Umapathy & Ritzhaupt, 2011). Professional associations bear a responsibility to provide career development opportunities for its members.

Networking

Professional networking opportunities not only support activities that bring professionals together, they provide occasions, both formally and informally, for mentoring both inside and outside of the workplace. Mentoring in a professional network assist the mentee through the guidance and navigation of their career (Higgins & Kram, 2001, de Janasz & Sullivan, 2004). These mentoring programs can reach professionals practicing in the field and students seeking to enter the profession. Examples of networking activities include: access to local meetings with experts in the field, annual conferences, access to social events (e.g., parties, field trips), and access to social media and other forms of communication technologies, like member directories, discussion forums, user and special interest groups, and listservs (Ritzhaupt et al., 2008). As noted, professional associations can provide services to enhance the awareness and acumen of instructional designers in higher education by providing news on technological and pedagogical developments, research developments, and even the latest vendor solutions through intentional and professional engagements bringing other professionals together. All the services provided by professional associations can be linked to the networking opportunities to engage with other professionals sharing similar interests and concerns.

Purpose

Thus, the purpose of this research was to identify the professional association services relevant to instructional design professionals working in higher education. More specifically, we are interested in the professional association services that instructional designers in higher education desire and need for their professional function. To this end, we attempted to design, develop, and validate a survey to validly and reliably measure these factors for this target population of interest by collecting data from these working professionals. Our overarching

research question is: What professional association services do instructional designers in higher education need for their professional networking, leadership, and career development? We used the conceptual framework described above to document the professional association services desired by instructional designers working in higher education.

Method

Participants

A total of $N = 309$ participants opened the online survey and agreed to the consent page. However, a substantial amount of participants either did not complete the survey or did not meet our screening criteria (i.e., instructional designer working in higher education) for inclusion ($n = 30$). We excluded participants that did not complete at least 50% of the items on the survey. A final sample of $N = 217$ or 70% instructional design professionals completed at least 50% of the final instrument and were retained in the sample for further analysis. As illustrated in Table 1, the participants represented a wide range of backgrounds. The participants had a wide range of experience from less than one year to 35 years with an average of $M = 7.94$ ($SD = 6.10$). Nearly three quarters of the participants were female, and the participants largely identified as White/Caucasian at approximately 81% of the sample.

Seventy-five percent of the participants worked at public institutions of higher education, and the participants could generally be classified as highly educated with 62% possessing a master's degree and 28% holding a doctoral degree. The participants were members of a wide-variety of professional associations with higher percentages in the Online Learning Consortium (OLC) (47%) and EDUCAUSE (45%). The size of the institutions of higher education varied according to the reported number of employees. More than 50% of the respondents indicated their institutions provided either full or partial support for professional association memberships. Income levels normally distributed around \$50,001-\$75,000 with more than 60% of the participants reporting this category. Participants were located in 37 different states in the United States ranging from California to Maine, and $n = 6$ participants were located outside the U.S.

Table 1

Demographic Characteristics of Instructional Design Professional Survey Respondents

Demographic Variable	Categories	n	%
		161 74.19	
Gender	Female	161	74.19
	Male	55	25.35
Income Level	Not reported	2	0.92
	0-\$25,000	3	1.38
	\$25,001-\$50,000	26	11.98
	\$50,001-\$75,000	133	61.29
	\$75,001-\$100,000	40	18.43
	\$100,000-\$150,000	12	5.53
	>\$150,000	1	0.46
Race	American Indian	5	2.30
	Alaska Native	1	0.46
	Asian	13	5.99
	Black/African American	19	8.76
	Hawaiian/Other Pacific Islander	1	0.46
	Hispanic/Latino	16	7.37
	White/Caucasian	176	81.11
Sector of Economy	Private	53	24.42
	Public	164	75.58
	High School	1	0.46
Highest Level of Education	Associate	1	0.46
	Bachelor	13	5.99
	Master	134	61.75
	Specialist	4	1.84
	Doctorate	59	27.19
	Other	5	2.30
	ATDF	21	9.68
Professional Association Membership	AACE	10	4.61
	AECT	33	15.21
	EDUCAUSE	98	45.16
	IEEE TCLT	5	2.30
	ISPI	5	2.30
	ISTE	18	8.29
	OLC	103	47.47
	eLearning Guild	42	19.35
	USDLA	16	7.37
	0-100	4	1.84
Number of Employees in Institution	101-250	9	4.15
	251-500	17	7.83
	501-1000	35	16.13
	1001-2,500	31	14.29
	2,501-5,000	31	14.29
	5,001 or more	55	25.35
	I don't know	35	16.13
Support for Professional Association Membership	None	105	48.39
	Partial reimbursement or payment	18	8.29
	Full reimbursement or payment	91	41.94

Instrument Design and Development

This research study employed and tailored a research instrument previously used to measure the services motivating professional association membership of computing professionals. This survey was titled the *Ideal Computing Professional Association Survey* and preliminary validity and reliability evidence was provided on a sample of $N = 220$ participants in one computing professional association (Ritzhaupt, Umaphy, & Jamba, 2008; Ritzhaupt, Umaphy, & Jamba, 2012). The original survey had 52-items organized into seven domains: *Career-enhancement services, Information dissemination services, Professional networking services,*

Communication services, Member discount services, Leadership and community services, and Advocacy services (Ritzhaupt, Umaphy, & Jamba, 2012). To be applicable to the present research study, several modifications had to be made to broadly address the current professional needs of instructional designers in higher education and to match the current organizational structure and services provided by the *Association for Educational Communications and Technology* (AECT).

First, a revised conceptual framework (described above) was developed based on the literature surrounding the unique characteristics and needs of instructional designers working in the context of higher education, the current structure and services offered by AECT, and the existing structure of the original survey. Second, the revised survey was carefully reviewed by members of the research team with expertise in scale development, and subsequently, administered to four instructional designers working in higher education using a think aloud protocol to cognitively validate the survey items using well-established systematic procedures (Payne, 1994; Trenor et al., 2011; Willis et al., 1991). This procedure ensured the clarity and intent of the items matched our intended purpose. This process led to several revisions to the wording of the items and slight re-organization to the survey. The resulting final draft of the survey has 44-items using a modified 5-point Likert scale format (5 = Strongly Agree; 4 = Agree; 3 = Neither agree, nor disagree; 2 = Disagree; 1 = Strongly Disagree). The survey was ported to the Qualtrics survey management system with two screening questions (e.g., Do you presently work for an institution of higher education?), a background section (including items like gender, age, experience, job title, education level, etc.), and seven open-ended questions (e.g., What factors encourage your participation in a professional association?). The revised survey was given the title *Instructional Designer in Higher Education Professional Association Survey* (IDHEPAS). Note, we only report the quantitative data collected in this article.

Data Collection Procedures

The IDHEPAS was released to a wide audience of the professional instructional design community using an assortment of approaches: 1) instructional design listservs (e.g., Educause instructional designer listserv, ITFORUM listserv), 2) social media outlets for instructional designers (e.g., Facebook and LinkedIn instructional designer professional groups), 3) scraped community college and university websites for instructional designers in three states in the southeastern United States, 4) alumni listservs from academic programs (e.g., University of Florida, Boise State University, Florida State University, University of South Florida), and 5) invitation emails to the staff of *Centers for Teaching Excellence* at 62 different universities. Since the survey was anonymous, participants were

encouraged to share the survey with members of their professional community serving in the higher education capacity – a snowball sampling approach. The online survey was accessible for a 3-week period, and during this time, two reminder emails or notifications were sent out to all communication methods noted above. Since so many different approaches to recruiting participants were used, response rates cannot be determined for these data.

Data Analysis

Data were subjected to a variety of analyses, including descriptive statistics analysis, internal consistency reliability analysis, exploratory factor analysis (EFA), and correlation analysis (i.e., Pearson r correlations among factors on IDHEPAS). Since major revisions were made to the original survey, an EFA was the most appropriate data analysis method. EFA was conducted to explore the underlying structure of the data collected using the IDHEPAS and to provide meaningful labels to the factors on the IDHEPAS. Descriptive statistics analysis was conducted to examine the patterns in this cross-sectional dataset, and to characterize the various factors on the IDHEPAS for these data. Internal consistency reliability using Cronbach's alpha was used to provide reliability evidence for these data. Correlation analyses were employed to examine the internal structure of the measures. Underlying assumptions of the various statistical methods were evaluated. All quantitative analyses were conducted using SPSS version 25. An alpha level of .05 was used for all statistical tests.

Results

The results are presented by each type of analysis conducted on these cross-sectional data. We first examine the data for the assumptions for conducting EFA. Bartlett's test of sphericity for these data had a Chi-square of 8,134.90 ($p < .001$), which suggested the intercorrelation matrix contained adequate common variance. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.94, which is above the 0.50 recommended limit (Kaiser 1974). The participant-to-item ratio for the data was approximately ~5:1. While the participant-to-item ratio is below the 10:1 ratio suggested by Kerlinger (1974), the ratio is near thresholds described as more than adequate by some researchers in maintaining factor stability (Arrindell & Van der Ende 1985; de Winter, Dodou, & Wieringa, 2009; Guadagnoli & Velicer 1988). Thus, these data appeared to be well suited for EFA.

Exploratory Factor Analysis

The EFA model was executed using principal axis factoring and an oblique (promax) rotation, as the factors were anticipated to be related. The pattern matrix is reported in the Appendix. The number of factors retained was based on the Kaiser criterion (Eigenvalue > 1) and inspection of the Screen plots generated. Items were assigned to factors based on the greatest values in the pattern matrix. The EFA data from the initial model showed eight factors and data were extracted in eight rotations. The data did not exhibit a simple structure in the pattern matrix; however, all coefficients used to assign items to factors in the pattern matrix were at or above 0.44. The factor model explained ~71% of the variance in these data with the 8-factor solution. Although the data did not lead to a truly simple structure in the pattern matrix, the items did load into a meaningful factor structure to explain these data. Thus, the eight factor solution was adopted for these data. Table 2 provides the Eigenvalues, variance, and cumulative variance for the factors on the IDHEPAS. Notably, the *Professional networking services* factor explained approximately 44% of the variance in these data.

Table 2

Eigenvalues, Variance, Cumulative Variance by Factor Labels

Factors	Eigenvalues	Variance (%)	Cumulative Variance (%)
1. Professional networking services	19.406	44.105	44.105
2. Growth and advocacy services	3.133	7.121	51.226
3. Professional communication services	2.225	5.056	56.282
4. Ancillary discount services	1.688	3.837	60.119
5. Leadership and mentoring services	1.451	3.297	63.416
6. Relevant literature services	1.219	2.771	66.187
7. Training and credentialing services	1.167	2.652	68.839
8. Vendor and continuing education services	1.051	2.389	71.227

Table 3 provides the factor label, mean, standard deviation, skewness, kurtosis, number of items, and Cronbach's alpha for the factors. As can be gleaned in Table

3, the highest scores were the factors *Professional networking services* at $M = 4.39$, and *Relevant literature services* at $M = 4.35$. Also notable and above the 4.0 threshold are the factors *Training and credentialing services* ($M = 4.15$), *Professional communication services* ($M = 4.06$), and *Vendor and continuing education services* ($M = 4.01$). The lowest scoring factor below the 3.0 threshold was *Ancillary discount services* ($M = 2.99$). Not all of the factors appear to be normally distributed as evidenced by the skewness and kurtosis coefficients for *Professional networking services*, *Growth and advocacy services*, and *Relevant literature services*. All of the internal consistency reliability coefficients are above the 0.70 social science standard (Nunnally, 1978). Generally speaking, the IDHEPAS has an internally consistent structure for these data.

Table 3

Factors Labels, Descriptive Statistics, and Reliability for These Data

Factor label	M	SD	Skewness	Kurtosis	# of items	Cronbach α
1. Professional networking services	4.39	0.68	-2.47	8.22	9	0.92
2. Growth and advocacy services	4.14	0.71	-1.47	3.37	11	0.91
3. Professional communication services	4.06	0.74	-0.98	1.32	7	0.88
4. Ancillary discount services	2.99	1.19	0.02	-0.78	3	0.97
5. Leadership and mentoring services	3.91	0.86	-0.98	1.30	6	0.92
6. Relevant literature services	4.35	0.82	-1.97	4.93	3	0.91
7. Training and credentialing services	4.15	0.75	-1.23	1.86	3	0.72
8. Vendor and continuing education services	4.01	0.95	-0.94	0.56	2	0.88

Descriptive Statistics Analysis

The descriptive statistics for the 44-item instrument, including the mean, standard deviation, and response frequencies as percentages (5 = Strongly Agree; 4 = Agree; 3 = Neither agree, nor disagree; 2 = Disagree; 1 = Strongly Disagree) as provided in the following sections to characterize each of the factors derived from

the EFA. Notably, the services listed in the instrument appear to be relevant to instructional designers in higher education as only one item was below the 3.00 threshold across the 44-item survey (Access to special discounts on food and beverage services).

Professional networking services. The *Professional networking services* factor emphasized conference-related activities provided by a professional association, including providing access to relevant conferences, dissemination of conference call for proposals, and access to conference proceedings and speaker presentation files (see Table 4). Other items referenced activities and services provided at conferences (e.g., Dissemination of latest research developments) As the highest rated factor, all of the items with the exception of Dissemination of latest vendor solutions ($M = 3.83$) were above the 4.0 threshold for these data. Four of the items were above 4.50: Awareness of new pedagogical developments ($M = 4.63$), Awareness of new technological developments ($M = 4.58$), Access to relevant conferences ($M = 4.57$), and Dissemination of latest research developments ($M = 4.55$).

Table 4

Professional Networking Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
10. Access to conference proceedings	4.46	0.88	2.76	0.92	6.45	27.19	62.67
11. Access to speaker presentation files	4.34	0.89	2.30	1.38	10.14	32.26	53.92
12. Awareness of new technological developments	4.58	0.74	1.38	0.92	4.15	25.81	67.74
13. Awareness of new pedagogical developments	4.63	0.72	1.38	0.92	3.23	22.58	71.89
14. Dissemination of latest research developments	4.55	0.80	1.84	1.84	2.76	26.73	66.82
15. Dissemination of latest vendor solutions	3.83	1.05	3.23	6.45	25.81	33.18	31.34
16. Dissemination of conference call for papers (CFP)	4.30	0.93	2.30	2.30	11.52	30.41	53.46
17. Conversations with other professionals over meals or socials	4.24	0.90	2.30	1.84	11.52	38.25	46.08
19. Access to relevant conferences	4.57	0.81	2.76	0.46	2.30	26.27	68.20

Growth and advocacy services. The *Growth and advocacy services* factor included items providing growth opportunities for members (e.g., To receive professional recognition via achievement awards) and several advocacy activities (e.g., To obtain member voting rights). As the factor represented with the largest number of items (Items = 11), the *Growth and advocacy services* factor speaks to the diversity of services offered by professional associations to provide professional growth opportunities for its members (see Table 5). The instructional designers in this sample were least interested in receiving professional recognition via awards ($M = 3.93$) and obtaining voting right within the association ($M = 3.63$). More importantly, participants desired opportunities and services to connect with professionals with common concerns and interests ($M = 4.31$), receive career advice from other professionals ($M = 4.30$), and the ability to impact the profession through research and practice ($M = 4.41$) provided by professional associations.

Table 5

Growth and Advocacy Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
3. Access to employment listings in field or related fields	4.41	0.86	1.38	1.38	12.44	24.88	59.91
5. To receive career advice from other professionals (e.g., mentorship programs, networking)	4.30	0.88	1.84	1.84	11.06	35.02	50.23
6. To receive professional recognition via achievement awards	3.93	1.00	2.76	4.61	23.50	35.48	33.64
18. Access to local meetings with relevant speakers	4.24	0.96	2.30	4.61	8.76	35.02	49.31
33. To promote the profession to the general public (e.g., employers)	4.09	1.04	4.15	2.76	16.13	33.64	42.86
34. To connect with professionals who promote your concerns or interests	4.31	0.90	2.30	2.30	8.76	35.02	51.61
35. To impact the profession through research and practice	4.41	0.90	2.76	1.84	5.99	30.88	58.53
36. To receive information on latest advocacy efforts	4.16	0.97	3.23	3.23	11.52	38.71	43.32
37. To receive guidance on ethical matters	4.00	1.07	4.15	5.53	15.67	35.02	39.63
38. To receive guidance on legal matters (e.g., ADA)	4.04	1.04	2.76	6.45	15.67	34.10	41.01
39. To obtain member voting rights	3.63	1.06	5.07	5.07	35.48	30.41	23.96

Professional communication services. The *Professional communication services* factor describes many different forms for professionals to communicate and engage within and across a professional association, particularly using computer-mediated communications (see Table 6). While several of these services are below the 4.00 threshold, such as Access to social media of other professionals ($M = 3.96$), Access to member directories ($M = 3.87$), and Access to user groups on vendor solutions ($M = 3.69$); other services were deemed more agreeable to participants in professional associations. For instance, Access to special interest groups or divisions (e.g., distance learning) ($M = 4.26$), and Access to social media related to the association ($M = 4.26$) tied for the highest scores in this category.

Table 6

Professional Communication Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
20. Access to social media related to the association	4.26	0.91	1.84	1.84	14.75	31.34	50.23
21. Access to social media of other professionals	3.96	0.99	1.38	7.83	19.35	35.94	35.48
22. Access to relevant listservs	4.15	0.96	1.38	4.61	17.05	30.88	45.62
23. Access to member directories	3.87	1.07	4.15	6.91	18.89	37.33	32.26
24. Access to relevant online discussion forums	4.21	0.92	1.84	3.23	12.44	35.48	45.62
25. Access to user groups on vendor solutions	3.69	1.05	4.15	7.37	28.11	35.94	23.96
26. Access to special interest groups or divisions (e.g., distance learning)	4.26	0.86	1.84	1.84	10.60	39.63	45.62

Ancillary discount services. The results are relatively clear that the instructional designers in this sample were less interested in the *Ancillary discount services* offered by professional association (see Table 7). As the lowest scoring factor in these data, the *Ancillary discount services* represent things like: Access to special discounts on group insurance plans (e.g., car insurance), Access to special discounts on financial services, and Access to special discounts on food and beverage services. All of the items in this factor scored less than 3.50, indicating that the instructional designers are less agreeable to these professional association services.

Table 7

Ancillary Discount Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
42. Access to special discounts on group insurance plans (e.g., car insurance)	3.03	1.23	12.90	19.82	34.10	17.97	15.21
43. Access to special discounts on financial services	3.01	1.22	13.36	19.82	33.18	19.82	13.82
44. Access to special discounts on food and beverage services	2.93	1.22	14.75	20.74	34.56	17.05	12.90

Leadership and mentoring services. The *Leadership and mentoring services* construct was measured by items relating to providing professional service in leadership positions in a professional association, and providing mentorship and sponsorship of other professionals or students within an association (see Table 8). While the overall mean for the factor was just below the 4.00 threshold at $M = 3.91$, some of the opportunities and services were agreeable to the instructional designers in our sample, including: To fulfill leadership positions in the association ($M = 4.06$), To serve on committees, divisions, or task forces ($M = 4.17$), and To mentor other professionals ($M = 4.02$). Participants were less agreeable to opportunities to mentor students ($M = 3.63$) or to sponsor educational programs ($M = 3.83$).

Table 8

Leadership and Mentoring Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
27. To fulfill leadership positions in the association	4.06	0.96	3.23	1.84	18.43	39.17	37.33
28. To serve on committees, divisions, or task forces	4.17	0.92	2.30	2.76	13.36	38.71	42.86
29. To serve on the board of directors	3.77	1.05	5.07	4.15	26.27	37.33	27.19
30. To mentor students	3.63	1.15	6.45	7.83	29.49	29.03	27.19
31. To mentor other professionals	4.02	1.01	3.23	3.69	19.35	35.48	38.25
32. To sponsor educational programs	3.83	1.01	3.69	3.23	29.03	34.10	29.95

Relevant literature services. As the second highest overall factor in these data, the *Relevant literature services* factor appears to be an important facet to instructional designers desires of a professional association (see Table 9). The

participants were relatively clear in their agreement with professional associations providing access to relevant literature in the form of magazines and periodicals ($M = 4.30$), white papers ($M = 4.39$), and journals ($M = 4.35$).

Table 9
Relevant Literature Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
7. Access to magazines and periodicals	4.30	0.88	2.30	1.84	8.76	37.33	49.77
8. Access to relevant white papers	4.39	0.87	2.30	0.92	9.22	30.88	56.68
9. Access to journals	4.35	0.94	3.69	0.46	9.22	30.88	55.76

Training and credentialing services. The instructional designers representing the higher education context in this sample are affable to professional associations providing *Training and credentialing services* (see Table 10). Notably, the participants were less interested in Access to soft skills (e.g., interviewing techniques) training opportunities ($M = 3.90$); however, they did appear to desire Access to technical skills training opportunities ($M = 4.38$) from professional associations. Also notable was the desire for access to licensure or professional certifications at $M = 4.17$.

Table 10
Training and Credentialing Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
1. Access to technical skills training opportunities	4.38	0.83	0.92	4.15	4.61	36.87	53.46
2. Access to soft skills (e.g., interviewing techniques) training opportunities	3.90	0.96	2.30	6.91	16.59	46.54	27.65
4. Access to licensure or professional certification(s)	4.17	1.01	3.23	4.15	11.52	34.10	46.54

Vendor and continuing education services. The *Vendor and continuing education services* factor was measured by two items on the scale: Access to vendor discounts (e.g., e-learning software), and Access to special discounts on continuing education courses (e.g. Project Management) (see Table 11). While vendor

discounts ($M = 3.85$) was rated less than discounts on continuing education courses ($M = 4.17$), both services appear to be relevant to instructional designers expectations of professional association services.

Table 11

Vendor and Continuing Education Services Descriptive Statistics

Items	M	SD	S.D.	D	N	A	S.A.
40. Access to vendor discounts (e.g., e-learning software)	3.85	1.03	2.76	6.91	24.42	34.10	31.80
41. Access to special discounts on continuing education courses (e.g. Project Management)	4.17	0.98	2.30	3.69	16.13	30.88	47.00

Correlation Analysis

Table 12 provides the correlation coefficients among the items used on the IDHEPAS. As can be seen in the matrix, correlation coefficients are all relatively strong and positive, ranging from $r = 0.27, p < .001$ (i.e., weakest correlations are with the *Ancillary discount services*) to $r = 0.75, p < .001$ (i.e., strongest correlations are with the *Professional networking services* and *Growth and advocacy services* factors). Notably, all of the correlation coefficients were statistically significant at a .01 level. These strong and positive correlation coefficients suggest that the scale is cohesive, and perhaps, measuring the underlying multidimensional constructs well - services motivating instructional designers in higher education to engage in professional associations. This point is reinforced by the Cronbach alpha for the all items of the data being relatively high at $\alpha = .97$, which is well above the 0.70 social science standard (Nunnally, 1978). It would appear the factors are “hanging” together well to form a larger factor of the IDHEPAS with these data.

Table 12

Correlations for the Factors on the IDHEPAS

Factors	1	2	3	4	5	6	7	8
1. Professional networking services	1							
2. Growth and advocacy services	.739	1						
3. Professional communication services	.708	.750	1					
4. Ancillary discount services	.295	.341	.337	1				
5. Leadership and mentoring services	.685	.763	.643	.384	1			
6. Relevant literature services	.687	.558	.549	.270	.447	1		
7. Training and credentialing services	.521	.588	.477	.360	.495	.384	1	
8. Vendor and continuing education services	.585	.602	.521	.524	.537	.498	.502	1

Note. All correlations were significant of the .01 level.

Discussion

The interpretation and discussion of these results should be viewed in light of both the limitations and delimitations of this research study. As with any survey research, the quality of the information collected is a function of the honesty, backgrounds, and expertise of the professional instructional designers that responded to the survey. As every effort was made to cast a wide net of instructional design professionals working in higher education by using popular listservs (e.g., ITFORUM), alumni listservs in established academic programs (e.g., FSU), social media venues (e.g., LinkedIn), and contacting instructional designers directly via email scrapes to solicit professionals to respond to the survey, only $N = 217$ participants ultimately completed the survey. Participation and non-response bias is certainly a consideration with these data. Generally speaking, the professionals responding to the survey were mostly female, White/Caucasian from the United States, working in the public sector, and highly educated. Indeed, the results may have varied dramatically with an international perspective or had there been more diverse individuals (e.g., race) responding to the request. Since we used listservs that have overlapping membership, we could not calculate response rates for the administration.

The IDHEPAS was modeled after a survey designed the services motivating professional association membership of computing professionals (Ritzhaupt et al., 2012). While computing fields and instructional design share much in common (e.g., Adnan & Ritzhaupt, 2018), the two fields also have several differences in professional composition and goals. Although we tailored the survey using extant literature from the field (e.g., Kumar, & Ritzhaupt, 2017; Litchfield, 2017;

Ritzhaupt, & Kumar, 2015), the original design of the survey was largely modeled from this previous work. To address this concern, we crafted a new conceptual framework (Figure 1) which was used to derive the items on the modified survey. We also had experts review the survey and conducted a formal think aloud process to validate the content of the scale. A final note is that we did not attempt to explore the differences among the instructional design participants using the demographic data we collected. Since this type of analysis was not aligned to our purpose or research question, we did not analyze the data using comparative statistical techniques (e.g., Multivariate Analysis of Variance). Even with these items noted, our results have provided some very interesting findings worth of discussion.

First, we can discuss the psychometric properties of the IDHEPAS for these data. The IDHEPAS has 44-items that formed an eight factor instrument explaining approximately 71% of the variability in these data. Specifically, the IDHEPAS measures: 1) *Professional networking services*, 2) *Growth and advocacy services*, 3) *Professional communication services*, 4) *Ancillary discount services*, 5) *Leadership and mentoring services*, 6) *Relevant literature services*, 7) *Training and credentialing services*, and 8) *Vendor and continuing education services*. The internal consistency reliability evidence demonstrates the factors are all above the 0.70 social science standard. Further, the correlations among the factors provide evidence that the IDHEPAS is measuring a multi-dimensional construct. Also notable, while the pattern matrix illustrated in the Appendix did not show a truly simple structure (e.g., items had cross-loadings), the coefficients to assign items to factors were all above 0.40. The preliminary validity and reliability evidence of the IDHEPAS for these data suggest the scale performing satisfactorily.

Given the IDHEPAS appears to be measuring the factors well, we can next discuss the findings from the first administration of the survey. The two highest rated factors were *Professional networking services* ($M = 4.39$), and *Relevant literature services* ($M = 4.35$). It would appear that instructional designers in higher education desire many relevant services from professional associations. Chiefly among them, instructional designers in higher education wanted access to relevant conferences along with opportunities to access the conference materials, such as conference proceedings or speaker presentation files after the formal event. At these conferences, our participants suggested that both technological and pedagogical developments are important, as well as the latest research surrounding these things. Instructional designers in our sample also wanted access to relevant literature, including journals, white papers, and magazines and periodicals. All the professional associations on our survey provide some forms of relevant literature for their members, such as *Educational Technology Research*

and Development or Performance Improvement Quarterly. The need for access to learning materials is further supported by the smallest factor, *Vendor and continuing education services*, being rated at $M = 4.01$. The evidence is clear: instructional designers in higher education are in need of professional learning opportunities from their professional associations.

Similarly, instructional designers suggested that *Growth and advocacy services* ($M = 4.14$) and *Training and credentialing services* ($M = 4.15$) are relevant to their professional lives. Engagement with other professionals through mentoring programs, guest speakers at local meetings, connecting with professionals with similar interests, and the overall ability to impact the profession through research and practice were highly noted. The participants also desired relevant technical, and to a lesser extent, soft skill training opportunities. Notably, the notion of professional licensure or certification was popular among the instructional designers. Looking across our professional associations in the field, the *Association for Talent Development* (ATD) offers the Certified Professional in Learning and Performance (CPLP), the *International Society for Performance Improvement* (ISPI) offers the Certified Performance Technologist (CPT), and the *International Society for Technology in Education* (ISTE) offers the newly established ISTE Certification for Educators. Notably, none of these certifications, in our judgement, are appropriate for instructional designers working in the context of higher education.

In the higher education environment, instructional design job descriptions often require a master's degree in instructional design or a related degree title, such as educational technology or learning design and technology. For instructional designers in higher education to receive further certification or credentials beyond a graduate degree in the field, they have few options from the current professional associations serving this population. Because instructional designers in higher education typically already possess a graduate degree, they often rely on their professional associations to provide additional courses, webinar, and other professional learning experiences to contribute to their professional growth and development. OLC Institute for Professional Development provides a four-course certification program for instructional designers in higher education as well as a program in project management, and research methods for instructional design professionals. However, these certification programs are not perceived as professional certifications, like CPLP or CPT programs.

The need for *Professional communication services* and *Leadership and mentoring services*, although not scored as high as some of their counterparts, were still factors agreeable to the instructional designers completing the survey. Today,

professional associations are expected to connect members both face-to-face and in virtual spaces online. Our participants indicated that these services are relevant to their profession, including such services as social media related to the professional association, listservs, online discussion forums, and the extension of special interest groups online (Donelan, 2016). Good news for these voluntary professional associations that operate almost exclusively on the voluntary service of professionals, these instructional designers are amenable to providing service to the associations in the form of leadership positions on committees, divisions, or taskforces; and to a smaller degree serving on the board of directors for the association. The participants even indicated a willingness to mentor other professionals, and to a lesser extent, students entering the profession.

The least rated factor to emerge from our data and analyses was the *Ancillary discount services* factor, which noted discount services often provided by professional associations for things like car insurance, legal representation needs, or even discounts on food and beverage. Across these eight factors, we see a theme emerge that instructional designers in higher education are in need of a professional association to provide these services, enabling them to engage with other professionals with similar interests, and access professional learning resources both in face-to-face venues, but more likely in on-demand online spaces. Also notable for professional association is that more than 50% of the participants indicated their institutions will provide either partial or fully support for professional association members.

Recommendations for Future Research

The instrument and conceptual framework employed in this research can be used by other researchers to conduct research on instructional designers working in other contexts, including business and industry, K-12, medical, government, and more. Are there differences among contexts (e.g., higher education, military, government, K-12 education, etc.) or demographics traits (e.g., gender)? Also important is the way in which these factors might change over time - studying the data longitudinally. Future research can employ the IDHEPAS to study a target professional association's membership over time to detect the important changes. How do these factors change over time, and how is this relevant to professional associations? Future research efforts should also seek to collect a larger and more diverse sample of instructional designers working in higher education to provide further evidence of the validity and reliability of the IDHEPAS. Conducting the next steps in the development and validation of the IDHEPAS might include a confirmatory factor analysis to test the instrument's structure under different circumstances. As with any research, we need measures built on the existing

theory that meet the social science standards of evidence (e.g., construct validity) to accomplish our research goals. The IDHEPAS holds promise a first step toward this end.

Additional research is needed to determine how membership to professional organizations influences instructional designers' decisions in the workplace. Qualitative research, exploring specific programs and organizational offerings, is needed to ensure alignment between professional organizations and the needs of their membership. It would also be beneficial to examine organizational offerings that are not being utilized or valued by members. This would help professional organizations in their strategic planning to focus their offerings on addressing specific needs and gaps in the professional development of their members (Ritzhaupt et al., 2012).

Recommendation for Professional Practice

We believe the findings of this research have a direct link to professional practice. These results are useful to professional association leaders, professionals, and to institutions of higher education. The primary professional audience of these data and findings are the leaders of professional associations reaching instructional designers in higher education. Professional association leaders should find the results particularly useful for conducting a gap analysis on the services presently offered by the professional association and the services that the association will need to offer to better meet the needs of this constituency - instructional designers in higher education (Ritzhaupt & Kumar, 2015). Further, these results can be used to plan the professional development and learning experiences for instructional designers in higher education by providing the needed services and opportunities for these professionals to engage. This form of professional development does not only have to be offered by professional associations (Garet et al., 2001; Zuber-Skerritt, 2013). Rather, the institutions of higher education can also provide these services in their organizations to develop the talent and expertise of their instructional design professionals (Larson, 2005; Tracey & Boling, 2014). Finally, professionals—instructional designers in higher education—can use the results to help select the best professional association to meet their professional development needs. Professionals can choose which professional associations to engage in for their growth and development.

References

Adnan, N. H., & Ritzhaupt, A. D. (2018). Software engineering design principles applied to instructional design: What can we learn from our sister

discipline? *TechTrends*, 62(1), 77-94.

Allen, I. E., & Seaman, J. (2014). Grade change. *Tracking online education in the United States. Babson Survey Research Group and Quahog Research Group, LLC*.

Arrindell, W. A., & Van der Ende, J. (1985). Cross-sample invariance of the structure of self-reported distress and difficulty in assertiveness. *Advances in Behavior Research and Therapy*, 7, 205-243.

Bickerstaff, S., & Cormier, M. S. (2015). Examining faculty questions to facilitate instructional improvement in higher education. *Studies in Educational Evaluation*, 46, 74-80.

Byun, H. (2000). *Identifying job types and competencies for instructional technologists: A five-year analysis* (Publication No. 9993525) [Doctoral dissertation, Indiana University]. Retrieved from <https://search.proquest.com/docview/304601855>

Chiasson, K., Terras, K., & Smart, K. (2015). Faculty perceptions of moving a face-to-face course to online instruction. *Journal of College Teaching & Learning*, 12(3), 231-240.

Christensen, T. K., & Osguthorpe, R. T. (2004). How do instructional-design practitioners make instructional-strategy decisions? *Performance Improvement Quarterly*, 17(3), 45-65.

Cox, S., & Osguthorpe, R. T. (2003). How do instructional design professionals spend their time? *TechTrends*, 47(3), 45-47.

Daniels, L., Sugar, W., Abbie, B., & Hoard, B. (2012, March). Educational technology professionals in higher education: Multimedia production competencies identified from a Delphi study. In *Society for Information Technology & Teacher Education International Conference* (pp. 1711-1714). Association for the Advancement of Computing in Education (AACE).

De Janasz, S. C., & Sullivan, S. E. (2004). Multiple mentoring in academe: Developing the professorial network. *Journal of Vocational Behavior*, 64(2), 263-283.

DeLeskey, K. (2003). Factors affecting nurses' decisions to join and maintain membership in professional associations. *Journal of PeriAnesthesia Nursing*, 18(1), 8-17.

- de Winter, J. C. F., Dodou, D., & Wieringa, P. A. (2009). Exploratory factor analysis with small sample sizes. *Multivariate Behavioral Research*, *44*(2), 147-181.
- Diamond, R. M. (2002). Faculty, instructional, and organizational development: Options and choices. In K. H. Gillespie, L. R. Hilsen, & E. C. Wadsworth (Eds.), *A guide to faculty development: Practical advice, examples, and resources* (pp. 2-8). San Francisco, CA: Jossey-Bass.
- Donelan, H. (2016). Social media for professional development and networking opportunities in academia. *Journal of Further and Higher Education*, *40*(5), 706-729.
- Elliott, M., Rhoades, N., Jackson, C. M., & Mandernach, B. J. (2015). Professional development: Designing initiatives to meet the needs of online faculty. *Journal of Educators Online*, *12*(1), n1.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, *38*(4), 915-945.
- Glendenning, B. J., & Gordon, J. C. (1997). Professional associations: promoting leadership in a career. *Library Trends*, *46*(1), 258-277.
- Gray, C. M., Dagli, C., Demiral-Uzan, M., Ergulec, F., Tan, V., Altuwajri, A. A., Gyaback, K., Hilligoss, M., Kizilboga, R., Tomita, K., & Boling, E. (2015). Judgment and instructional design: How ID practitioners work in practice. *Performance Improvement Quarterly*, *28*(3), 25-49.
- Gruen, T. W., Summers, J. O., & Acito, F. (2000). Relationship marketing activities, commitment, and membership behaviors in professional associations. *Journal of Marketing*, *64*(3), 34-49.
- Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, *103*, 265-275.
- Higgins, M. C., & Kram, K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *Academy of Management Review*, *26*(2), 264-288.
- Hoard, B., Stefaniak, J., Baaki, J., & Draper, D. (2017, November). The influence of multimedia production knowledge on the design decisions of the instructional designer. Presented at the Association for Educational Communication and Technology Conference, Jacksonville, FL.

- Hosler, K. A. (2013). Pedagogies, perspectives, and practices: Mobile learning through the experiences of faculty developers and instructional designers in centers for teaching and learning [Doctoral dissertation, University of Northern Colorado].
- Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31-36.
- Kang, Y., & Ritzhaupt, A. D. (2015). A job announcement analysis of educational technology professional positions: Knowledge, skills, and abilities. *Journal of Educational Technology Systems*, 43(3), 231-256.
- Kenny, R., Zhang, Z., Schwier, R., & Campbell, K. (2005). A review of what instructional designers do: Questions answered and questions not asked. *Canadian Journal of Learning and Technology/La revue canadienne de l'apprentissage et de la technologie*, 31(1).
- Kerlinger, F. (1974). *Foundations of behavioral research*. New York, City? Holt, Rinehart and Winston.
- Kumar, S., & Ritzhaupt, A. (2017). What do instructional designers in higher education really do? *International Journal on E-Learning*, 16(4), 371-393.
- Larson, M. B. (2005). Instructional design career environments: Survey of the alignment of preparation and practice. *TechTrends*, 49(6), 22-32.
- Larson, M. B., & Lockee, B. B. (2009). Preparing instructional designers for different career environments: A case study. *Educational Technology Research and Development*, 57(1), 1-24.
- Litchfield, B. C. (2017). Instructional design in higher education. In Reiser & Dempsey (Eds.), *Trends and Issues in Instructional Design and Technology* (pp. 185-191). New York, NY: Pearson.
- Nunnally, J. (1978). *Psychometric theory*. New York, City?: McGraw-Hill.
- Nworie, J. (2009). Managing the growing complexity of administration of academic technology in higher education. *AACE Journal*, 17(1), 23-44.
- Oliver, A. L. (1997). On the nexus of organizations and professions: Networking through trust. *Sociological Inquiry*, 67(2), 227-245.
- Payne, J.W. (1994). Thinking aloud: Insights into information processing. *Psychological Science*, 5(5), 241-248.

- Resig, J. J., Moore, A. L., Bong, J., Oyarzun, B. A., Rabel, D. K., & Conklin, S. A. (2017). Graduate student reflections on participating in the AECT design and development competition. *TechTrends*, 61(2), 99-100.
- Ritzhaupt, A. D., & Kumar, S. (2015). Knowledge and skills needed by instructional designers in higher education. *Performance Improvement Quarterly*, 28(3), 51-69.
- Ritzhaupt, A. D., Martin, F., Pastore, R., & Kang, Y. (2018). Development and validation of the educational technologist competencies survey (ETCS): Knowledge, skills, and abilities. *Journal of Computing in Higher Education*, 30(1), 3-33.
- Ritzhaupt, A. D., & Martin, F. (2014). Development and validation of the educational technologist multimedia competency survey. *Educational Technology Research and Development*, 62(1), 13-33.
- Ritzhaupt, A., Martin, F., & Daniels, K. (2010). Multimedia competencies for an educational technologist: A survey of professionals and job announcement analysis. *Journal of Educational Multimedia and Hypermedia*, 19(4), 421-449.
- Ritzhaupt, A. D., Umaphy, K., & Jamba, L. (2008). Computing professional association membership: An exploration of membership needs and motivations. *Journal of Information Systems Applied Research*, 1(4), 1-23.
- Ritzhaupt, A. D., Umaphy, K., & Jamba, L. (2012). A study on services motivating computing professional association membership. *International Journal of Human Capital and Information Technology Professionals*, 3(1), 54-70.
- Rowland, G. (1992). What do instructional designers actually do? An initial investigation of expert practice. *Performance Improvement Quarterly*, 5(2), 65-86.
- Stefaniak, J., Baaki, J., Hoard, B., & Stapleton, L. (2018). The influence of perceived constraints during needs assessment on design conjecture. *Journal of Computing in Higher Education*, 30(1), 55-71.
- Sugar, W. (2014). *Studies on instructional design practices: Current practices and lessons learned*. New York, NY: Springer.
- Terlouw, C. (1997). Instructional design in higher education. In S. Dijkstra, N. M. Seel, F. Schott, & R. D. Tennyson (Eds.), *Instructional Design: International Perspectives: Volume 2: Solving Instructional Design Problems* (Vol. 2, pp.

341-368). New York, NY: Routledge.

Tracey, M.W., & Boling, E. (2014). Preparing instructional designers: Traditional and emerging perspectives. In J.M. Spector, M.D. Merrill, J. Elen, & M.J. Bishop (Eds.), *Handbook of research on educational communications and technology* (4th ed., pp. 653-660). New York, NY: Springer.

Trenor, J. M., Miller, M. K., & Gipson, K. G. (2011). Utilization of a think-aloud protocol to cognitively validate a survey instrument identifying social capital resources of engineering undergraduates. In *American Society for Engineering Education*.

Umaphathy, K., Jamba, L., & Ritzhaupt, A. D. (2010). Factors that persuade and deter membership in professional computing associations. *Journal of Information Systems Applied Research*, 3(14), 1-11.

Umaphathy, K., & Ritzhaupt, A. D. (2011). Role of professional associations in preparing, recruiting, and retaining computing professionals (pp. 49-57). Presented at the Proceedings of the 49th SIGMIS annual conference on Computer personnel research, ACM.

van Leusen, P. (2013). Interpersonal consulting skills among instructional technology consultants at an institution of higher education in the Midwest: A multiple case study (Publication No. 3562615) [Doctoral dissertation, Indiana University]. ProQuest LLC.

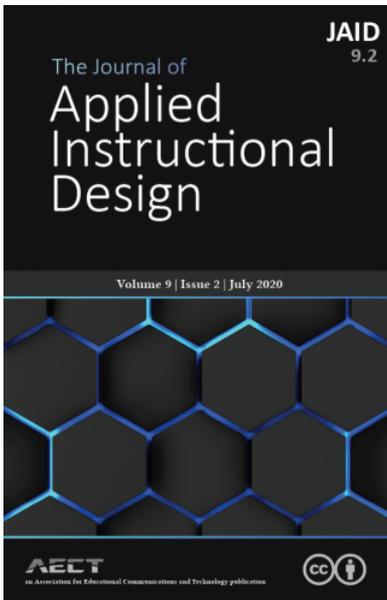
Wedman, J., & Tessmer, M. (1993). Instructional designers decisions and priorities: A survey of design practice. *Performance Improvement Quarterly*, 6(2), 43-57.

Willis, G.B., Royston, P., & Bercini, D. (1991). The use of verbal report methods in the development and testing of survey questions. *Applied Cognitive Psychology*, 5, 251-267. 6.

Zuber-Skerritt, O. (2013). *Professional development in higher education: A theoretical framework for action research*. New York, NY: Routledge.

Appendix: Pattern Matrix

Items	Factors							
	1	2	3	4	5	6	7	8
1. Access to technical skills training opportunities	0.438	0.425	0.358	0.254	0.374	0.297	0.720	0.315
2. Access to soft skills (e.g., interviewing techniques) training opportunities	0.243	0.385	0.294	0.231	0.357	0.258	0.649	0.243
3. Access to employment listings in field or related fields	0.386	0.543	0.297	0.123	0.427	0.386	0.420	0.308
4. Access to licensure or professional certification(s)	0.549	0.581	0.305	0.343	0.388	0.371	0.673	0.417
5. To receive career advice from other professionals (e.g., mentorship programs, networking)	0.590	0.649	0.476	0.154	0.573	0.455	0.513	0.244
6. To receive professional recognition via achievement awards	0.355	0.442	0.420	0.340	0.372	0.219	0.314	0.259
7. Access to magazines and periodicals	0.579	0.484	0.489	0.183	0.395	0.850	0.358	0.378
8. Access to relevant white papers	0.627	0.497	0.452	0.195	0.419	0.881	0.424	0.474
9. Access to journals	0.596	0.489	0.337	0.247	0.406	0.864	0.427	0.283
10. Access to conference proceedings	0.771	0.559	0.459	0.194	0.488	0.686	0.346	0.279
11. Access to speaker presentation files	0.846	0.625	0.517	0.233	0.547	0.628	0.403	0.347
12. Awareness of new technological developments	0.834	0.584	0.513	0.176	0.555	0.570	0.549	0.439
13. Awareness of new pedagogical developments	0.772	0.595	0.419	0.139	0.595	0.662	0.584	0.518
14. Dissemination of latest research developments	0.868	0.700	0.489	0.165	0.584	0.658	0.505	0.440
15. Dissemination of latest vendor solutions	0.650	0.379	0.509	0.428	0.393	0.291	0.363	0.314
16. Dissemination of conference call for papers (CFP)	0.787	0.602	0.455	0.162	0.535	0.544	0.421	0.368
17. Conversations with other professionals over meals or socials	0.610	0.557	0.485	0.280	0.517	0.390	0.501	0.100
18. Access to local meetings with relevant speakers	0.513	0.642	0.448	0.273	0.590	0.506	0.604	0.292
19. Access to relevant conferences	0.763	0.642	0.438	0.185	0.585	0.590	0.500	0.325
20. Access to social media related to the association	0.604	0.494	0.643	0.311	0.451	0.358	0.346	0.215
21. Access to social media of other professionals	0.449	0.413	0.620	0.472	0.419	0.365	0.302	0.181
22. Access to relevant listservs	0.417	0.507	0.735	0.072	0.475	0.419	0.400	0.278
23. Access to member directories	0.409	0.511	0.689	0.224	0.458	0.306	0.359	0.205
24. Access to relevant online discussion forums	0.569	0.649	0.718	0.203	0.588	0.586	0.535	0.477
25. Access to user groups on vendor solutions	0.582	0.538	0.764	0.345	0.475	0.401	0.469	0.498
26. Access to special interest groups or divisions (e.g., distance learning)	0.642	0.621	0.741	0.143	0.516	0.481	0.421	0.356
27. To fulfill leadership positions in the association	0.575	0.624	0.590	0.273	0.899	0.409	0.456	0.387
28. To serve on committees, divisions, or task forces	0.556	0.581	0.612	0.260	0.902	0.392	0.437	0.331
29. To serve on the board of directors	0.584	0.654	0.448	0.383	0.818	0.349	0.482	0.383
30. To mentor students	0.498	0.701	0.398	0.432	0.733	0.346	0.607	0.196
31. To mentor other professionals	0.606	0.731	0.465	0.338	0.821	0.506	0.574	0.109
32. To sponsor educational programs	0.496	0.602	0.317	0.281	0.697	0.424	0.520	0.248
33. To promote the profession to the general public (e.g., employers)	0.537	0.785	0.467	0.280	0.605	0.381	0.487	0.296
34. To connect with professionals who promote your concerns or interests	0.542	0.804	0.565	0.270	0.568	0.420	0.439	0.265
35. To impact the profession through research and practice	0.630	0.848	0.535	0.110	0.554	0.532	0.515	0.344
36. To receive information on latest advocacy efforts	0.673	0.824	0.602	0.214	0.608	0.490	0.507	0.485
37. To receive guidance on ethical matters	0.534	0.755	0.600	0.257	0.587	0.513	0.627	0.542
38. To receive guidance on legal matters (e.g., ADA)	0.495	0.662	0.605	0.347	0.578	0.451	0.539	0.523
39. To obtain member voting rights	0.488	0.659	0.499	0.429	0.529	0.336	0.471	0.345
40. Access to vendor discounts (e.g., e-learning software)	0.526	0.500	0.396	0.535	0.459	0.435	0.449	0.654
41. Access to special discounts on continuing education courses (e.g. Project Management)	0.566	0.580	0.436	0.419	0.512	0.472	0.552	0.720
42. Access to special discounts on group insurance plans (e.g., car insurance)	0.264	0.293	0.271	0.925	0.335	0.199	0.366	0.317
43. Access to special discounts on financial services	0.305	0.307	0.284	0.959	0.350	0.212	0.371	0.297
44. Access to special discounts on food and beverage services	0.270	0.321	0.310	0.921	0.324	0.194	0.341	0.284



Ritzhaupt, A. D., Stefaniak, J., Conklin, S., & Budhrani, K. (2020). A Study on the Services Motivating Instructional Designers in Higher Education to Engage in Professional Associations: Implications for Research and Practice. *The Journal of Applied Instructional Design*, 9(2). <https://dx.doi.org/10.51869/92adrjssckb>



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