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# Documenting Current Instructional Design Practices: Towards a Typology of Instructional Designer Activities, Roles, and Collaboration

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**Abstract:** The overall goal of this study was to conduct a yearlong inquiry into an instructional designer's activities and interactions with his clients. Exclusive focus of this study was on an instructional designer who worked at a large public university in the southeastern region of the United States. Documented in an instructional design activities log, this study analyzed 115 distinct activities. Using an emergent theme analysis approach, specific instructional design activities and roles emerged. In addition, the instructional designer's collaboration with his clients was analyzed. Results of this study augment the knowledge base of existing studies of instructional design practices.

**Keywords:** instructional design, instructional designers, instructional design roles, collaboration, professional development

Considerable effort to understand instructional designers' current practices has yielded several insights. Highlights include a listing of common instructional design (ID) practices (e.g., Wedman & Tessmer, 1993), informal ID practices (e.g., Williams, South, Yanchar, Wilson, & Allen, 2011) and how designers perform specific aspects of the ID process, such as task analysis (e.g., Loughner & Moller, 1998) and evaluation practices (e.g., Kennedy, Chyung, Winiecki, & Brinkerhoff, 2014). The interactions between an instructional designer and her clients also have been examined (Jin & Boling, 2010), as well as the influence of one's learning theories (e.g., Yanchar, South, Williams, Allen, & Wilson, 2010) and philosophical and methodological beliefs (Sheehan & Johnson, 2012) on the ID process. ID competencies required of professional instructional designers also have been studied (e.g., Klein & Jun, 2014). Moreover, studies have found that ID expertise can be developed using specific strategies and guidance (e.g., Ge & Hardré, 2010).

Recently, some studies have attempted to develop a more formal understanding of how instructional

designers can collaborate effectively with their clients. Collaboration has been identified as an essential skill for instructional designers (e.g., Authors Sugar, Brown, Daniels, & Hoard, 2011). Pan and Thompson's (2009) study identified three factors that contribute to successful collaboration, including a team member's expertise, a team member's motivation to complete a successful instructional design project, and an overall positive ID team culture. In their study on how instructional designers complete specific social and intellectual skills with their clients, Dicks and Ives (2008) found that instructional designers demonstrate a range of social building skills with their clients. These skills involve establishing credibility, attempting to find the middle ground and compromising with clients, mentoring clients, and managing an ID project. As a result of their study, Dicks and Ives asserted, "instructional designers employ a set of social skills and cognitive tools that enable them to act as a pedagogical 'conscience' in the design process" (Abstract section, para. 1).

In addition to this role of "pedagogical conscience", increased attention to the roles that instruc-

tional designers perform also has taken place. Specific instructional designer roles have been promoted such as Hokanson and Miller's (2009) *instructional architect*, *instructional artist*, *instructional craftsperson*, *instructional engineer*, and *instructional manufacturer*, as well as Authors' Sugar & Betrus' (2002) *designer as artist*, *designer as counselor*, *designer as performer*, *designer as problem-solver*, and *designer as user*. Others have advocated that instructional designers are agents of social change (Tracey, Hutchinson, & Grzebyk, 2014). In fact, Campbell, Schwier, and Kenny (2009) classified four types of instructional designer social-change agency roles, including: a) interpersonal, (b) professional, (c) institutional, and (d) societal.

The research methods of studies on existing ID practices have consisted of interviews, content analyses, surveys, questionnaires, observations, case studies, and Delphi studies (Author Sugar, 2014). Only a few studies have examined instructional designers' current practices over an extensive period of time (i.e., Perkins, 2009; Rapanta, Maina, Lotz, & Bacchelli, 2013; Tracey & Unger, 2012). Some studies (e.g., Chen, Moore & Vo, 2012) have documented how students completed ID activities over multiple semesters; only two studies have evaluated ID students over multiple years, including Magliaro and Shambaugh's (2006) study that spanned over eight years and Honebein and Honebein's (2014) study that covered more than six years. Instead of relying on data collected from research methods (e.g., interviews, surveys, observations, etc.) spanning a short time period, additional longitudinal studies on professional instructional designers' current practices would provide a more thorough understanding of these actions.

### **Purpose of Study**

The overall goal of this study was to conduct a yearlong inquiry into an instructional designer's activities and interactions with his clients in order to uncover this instructional designer's current ID practices, ID roles, and collaboration skills. In this type of extended investigation, one is able to gain a better understanding of the daily activities of an instructional designer. That is, instead of documenting a particular occurrence of an instructional designer's activities with a survey, an interview, or a similar data collection method, a year's worth of ID activities could give more insight into an instructional designer's current practices. Specifically, this study attempted to answer the following questions: (a) What types of ID activities does an instructional designer accomplish during a one-year period?; (b) What roles does an instructional designer perform during a one-year period?; and (c) How much collaboration does an instructional designer engage in with his clients during a one-year period?

### **Methods**

A case study approach was utilized (Yin, 2014) with this study. A case study is an effective research method for a new line of inquiries such as comprehending an instructional designer's activities, roles, and collaboration skills (Foreman, 1948). One of the researchers was the instructional designer and served as a participant-observer in this study.

### **Setting**

This study took place at a large public university in the southeastern region of the United States. The overall mission of the academic unit is to help public officials and citizens understand and improve upon state and local government processes. It also provides orientation and staff services to state legislators. The academic unit annually offers up to 200 courses, webinars, and specialized conferences for more than 12,000 public officials (e.g., county commissioners, city council members, school board members, etc.). In addition to these professional development activities, the academic unit offers a Masters of Public Administration (MPA) degree in two formats: a full-time, two-year residential program and an online program designed for working professionals and others seeking flexibility while advancing their careers in public service.

The instructional designer who participated in this study has a master's degree in Instructional Technology and has over six years of experience as an instructional designer. He has been an instructional designer for this particular academic unit for over four years. Prior to this current position, he worked for five years as the manager of a foreign language resource center at the same university. The instructional designer was a member of the academic unit's Instructional Support team and served as the team lead for the unit's distance education initiatives, including webinars, classroom captures, and e-learning modules. This instructional designer also worked closely with the faculty on their face-to-face instruction, particularly when they were interested in utilizing technology such as classroom response systems/clickers, PowerPoint and other interactive teaching strategies, or using the campus learning management system, Sakai.

In addition to the instructional designer, an instructional analyst, a multimedia developer, a networking and support services manager, a technology support specialist, and three web developers worked in the Information Technology Division, with the multimedia developer and instructional analyst being other members of the Instructional Support team. An Assistant Dean for Information Technology administered the division and the Instructional Support team reports directly to this Assistant Dean. The networking and support services manager also supervised a Helpdesk tech-

nician and an AV and Support technician.

### Data Collection Procedures and Analyses

In this study we conducted the following data collection procedures and analyses. First, the instructional designer maintained an ID activities log. In this log, he described the nature of his activities (both ID and non-ID) and his interactions with clients. Periodically, the instructional designer described these activities and reflected upon both his effective and his ineffective collaboration skills in a semi-structured interview format. In total, there were seven semi-structured interviews. The length of these interviews ranged from 45 to 90 minutes.

Next, a content analysis of the instructional designer's activities was conducted. The goal of this analysis was to determine the extent and type of instructional design activity that was completed. Using an emergent theme analysis approach, each activity completed by the instructional designer was the unit of analysis and was analyzed using a constant-comparative approach (Creswell, 2009). Two researchers (or the authors) independently analyzed each activity and participated in four conference call sessions. Initially, there were 87 agreements and 24 disagreements (.78 inter-coder agreement). After each initial review, the researchers reached 100% consensus on the coding.

Another content analysis of the instructional designer's activities was conducted by employing Hokanson and Miller (2009) and Authors' Sugar & Betrus' (2002) respective instructional designer roles. Again, each activity was the unit of analysis and the two researchers independently coded each activity using a constant-comparative approach (Creswell, 2009) by asking the following question: What role or roles did the instructional designer exhibit during the particular activity? Initially, there were 73 agreements and 38 disagreements in a total of three sessions (.66 inter-coder agreement). After each initial review, the researchers reached 100% consensus on the coding.

The instructional designer's clients completed a questionnaire with regards to their interactions with the instructional designer. Emphasis on his collaboration skills was monitored, as well as the clients' perceptions of the instructional designer's corresponding activities. In addition, the instructional designer rated the amount of collaboration for each activity using the following scale: (a) Tremendous amount of collaboration, (b) A lot of collaboration, (c) Fair amount of collaboration, (d) Little collaboration, and (e) No collaboration.

### Results

During a one-year period, the instructional designer worked with 57 clients. Over half of the clients were faculty members (50.8%; n=29), and over thirty

percent of the clients were staff members (31.6%; n=18). There were also seven webinar co-presenters (12.2%), two students (3.5%), and one administrator (1.7%). The instructional designer completed 111 distinct ID activities and 4 activities that did not directly relate to typical ID activities. The total time spent on these 115 activities was 700.09 hours. A description of the instructional designer's activities, roles, and collaboration with his clients can be found in the following sections.

### Instructional Designer's Activities

The instructional designer's activities were categorized into four main categories, including (a) design, (b) support, (c) production, and (d) non-ID. Design activities involve actual ID work including e-learning projects, PowerPoint presentations, social media activities, and webinars. The instructional designer provided support for a variety of e-learning modules, social media activities, face-to-face courses, webinars and just-in-time support. Production work involved audio, image and video media production activities. Non-ID activities included administrative work, attending committee meetings, professional development, and writing a journal article. As illustrated in Figure 1, the instructional designer spent 334.34 hours completing design activities (42%), 355.33 hours completing support activities (45%), 14.27 hours completing production activities (2%), and 84.99 hours completing non-ID activities (11%) during an entire year. Specific examples of the instructional designer's design, support, and production activities are described in the following paragraphs.

**Design.** The top three design activities that the instructional designer completed included: e-learning module design (10.9%), social media design (11.4%), and webinar design (9.1%) (see Figure 2). The instructional designer designed 14 e-learning modules during

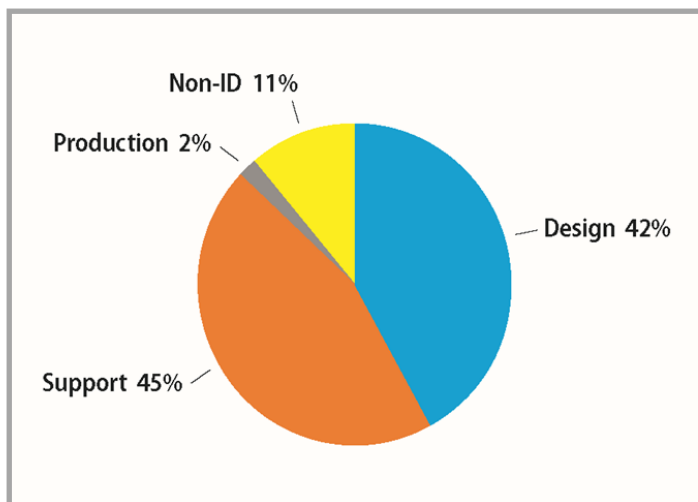


Figure 1. Percentage of time spent on main categories of ID activities

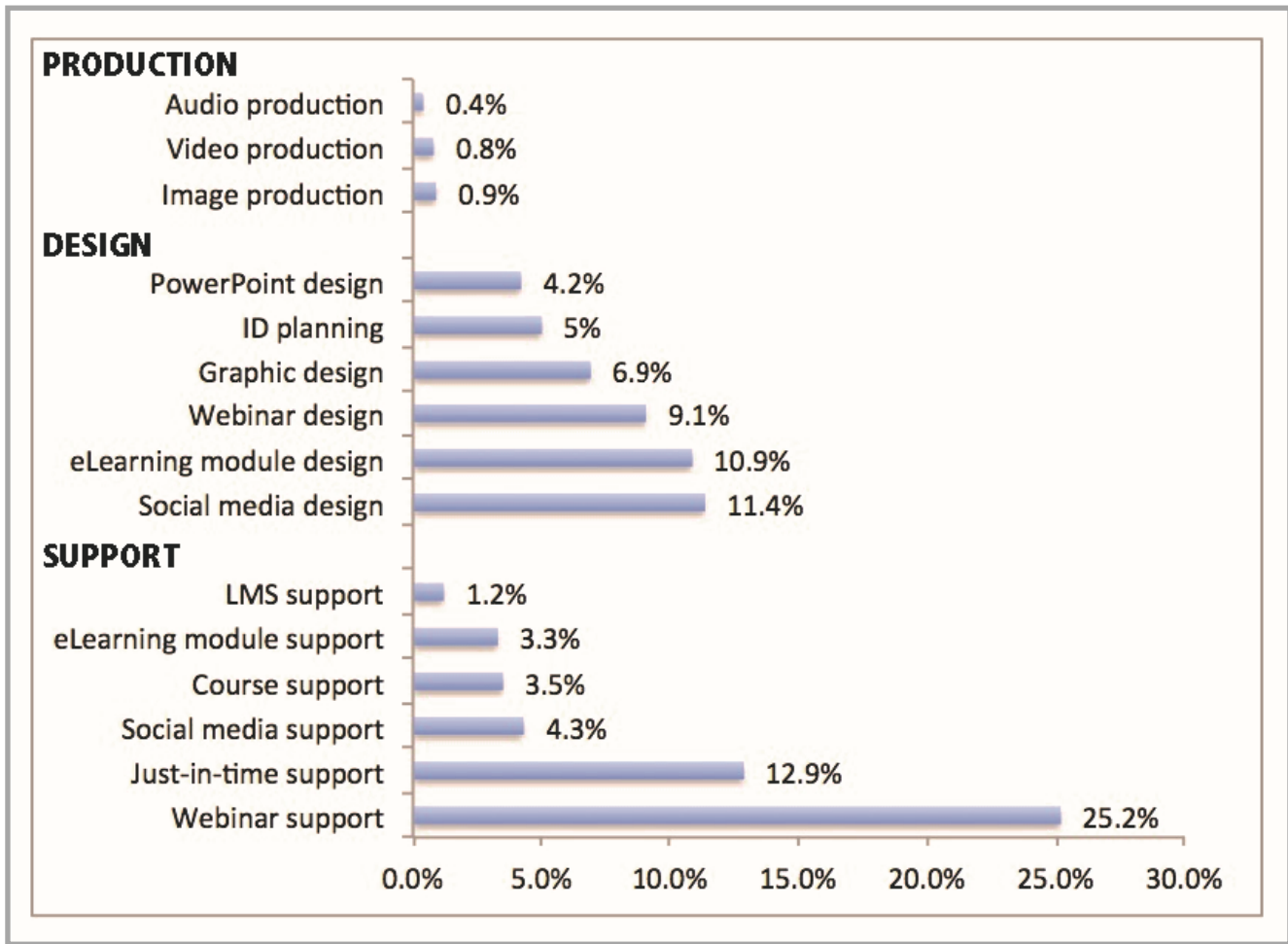


Figure 2. Percentage of time spent on specific types of ID activities

the one-year time period. His e-learning activities comprised two types of e-learning module initiatives. The first was a redesign of an existing e-learning module to make it more instructionally effective and visually engaging. The second initiative was the creation of six e-learning modules for an external organization. These e-learning modules were part of a series that covered land use development and featured custom graphics, animations and a consistent design that is carried through each of the modules. The instructional designer also developed social media activities, including creating a back-channel, creating content to post on a Twitter account, scheduling pre-event tweets for regional conferences, and other similar activities. The instructional designer also designed 19 webinars. Examples of this type of activity included the annual legislative update webinars and webinar series for human capital matters and open meetings. For these webinar series, the instructional designer worked closely with a graphic designer and faculty members to create a PowerPoint theme for the webinar series. In addition to these design activities, the instructional designer also completed graphic design activities (6.9%) and provided instructional design guidance to his clients (5%). Typically, these projects oc-

curred when a faculty member had a specific request for a graphic (e.g. a stock image of a businessman in a suit) or needed assistance with figuring out how to improve their PowerPoint presentations for a course.

**Support.** The top ID activity that the instructional designer completed was webinar support (see Figure 2). For the 19 webinars, examples of his support activities included making corrections to the PowerPoint presentations that would be used for live webinars and facilitating practice sessions for webinar presenters to get comfortable using the technology and equipment, technical support during the live webinar broadcast, and preparing a summative webinar report which included evaluation results and attendance. As shown in Figure 2, the instructional designer's second highest ID activity was just-in-time support (12.9%). This support activity was primarily a result of the instructional designer's hallway consultations. During these hallway consultations, the instructional designer played the role of a "guide on the side" where he would periodically do walkthroughs to check in on different faculty. In total, he completed 24 hallway consultations during the year. This informal approach helped him connect to a variety of clients and establish a relationship with these individ-

uals for future instructional design projects. He also provided course support for face-to-face courses (3.5%), the university's learning management system, Sakai (1.2%), e-learning modules (3.3%) and the School's social media initiatives (4.3%).

**Production.** The instructional designer's three most infrequent ID activities were audio production (.4%), video production (.8%), and image production (.9%). His production activities included inserting an audio clip into a PowerPoint presentation, finding and selecting images on an online website for a faculty member, converting a video clip from a DVD for an online course, and other similar production tasks. These activities were most likely infrequent due to multimedia developer on academic unit's staff. The bulk of this individual's responsibilities focused on production-related activities

### Instructional Designer's Roles

The instructional designer's activities were categorized into seven specific instructional designer roles. Six of these roles are based on Hokanson and Miller's (2009) and Authors' Sugar & Betrus' (2002) respective instructional designer roles, including *instructional architect*, *instructional engineer*, *instructional craftsman*, *instructional artist* and *designer as artist*, *designer as counselor*, and *instructional manufacturer*. One additional role that emerged from this data was the trainer role. These seven instructional designer roles are described in the following paragraphs.

**Architect.** The instructional designer completed 121.25 hours (14.1%) in an instructional architect role

(see Figure 3). This role employs a holistic perspective and sees the "big picture" of a particular ID project. Hokanson and Miller (2009) commented that this role goes "beyond merely solving the problem to extending the boundaries of project resources past the technical and educational specifications of the project." (p. 25). Some of these instructional architect activities included working with a faculty member who was interested in offering her instructional content to a national audience and marketing the webinar through social media, working closely with a new adjunct faculty member on how to effectively teach using the Sakai learning management system, developing a twitter backchannel for a conference, and other similar activities.

**Engineer.** The instructional engineer role includes the ability to provide clear explanation of how the project was developed and knows all of the technical details associated with a particular ID activity. Similarly to the instructional architect role, the instructional engineer also offers a macro perspective of the ID process. During the one-year time period, the instructional designer spent 15% of his time in an instructional engineer role. These instructional engineer activities involved working with a group of MPA students who were interested in extending their social media impact and their undergraduate case study competition, developing an opportunity for the MPA program to connect alums and current graduates with a social media campaign about the importance of an MPA degree, and working with the Marketing and Communications Division with the academic unit and the Dean of the School to craft an interactive roundtable session for faculty and

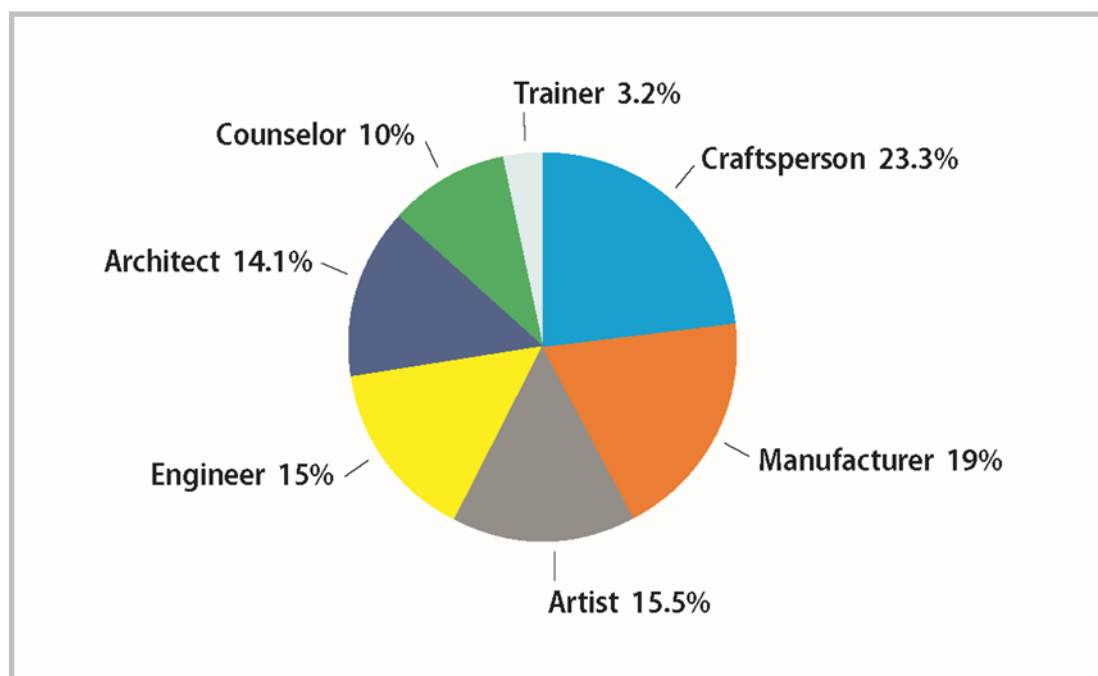


Figure 3. Percentage of time spent in specific instructional designer role

staff in order to update them on the current budget and upcoming changes.

**Craftsperson.** The instructional craftsperson role is a merger of innovation and ID practice. The instructional craftsman has the ability to communicate overall knowledge and nuances of a specific project and has a “high level of implicit knowledge through experience” and “seeks quality both in aesthetic and technical terms” (Hokanson & Miller, p. 26). The instructional designer exhibited this craftsperson role for 200.93 hours (23.3%) during this time period. Most of his instructional craftsperson activities revolved around his webinar design work. For example, he worked with individual faculty members to develop content that would be interactive and engaging and also worked with the graphic designer and the multimedia developer to create PowerPoint templates that would be professional-looking.

**Artist.** The instructional artist is a proponent of creative solutions and “one who deviates from the expected and embraces experimentation and failure; one who examines ideas that ultimately may not work...” (Miller & Hokanson, 2009, p. 21). During this time period, the instructional designer exhibited this artist role 133.69 hours (15.5%) of the time. During some of these instances, the instructional designer as an artist recommended creative solutions for modifying existing e-learning modules’ graphic design components, creating a PowerPoint graphic to illustrate a master class schedule, conceptualizing and helping to create a fictitious city that would be used throughout the land use module project to effectively teach concepts, and other similar artistic activities.

**Counselor.** The instructional designer spent 85.92 hours (10%) in a designer as counselor role (see Figure 3). Essentially, the instructional designer empathetically listened and attempted to understand the full spectrum of issues related to a client’s project or assignment. These counselor-like activities were exclusively linked to his just-in-time support hallway consultations. During these walkthroughs, he was able to ask questions about what faculty members were working on and effectively provide support for all of his clients.

**Manufacturer.** The instructional manufacturer is defined as a “technically skilled individual applying a pre-defined design template to solve an educational problem, delivering results as efficiently as possible” (Hokanson & Miller, p. 26). In other words, the exclusive goal of an instructional manufacturer is to complete actual tasks according to clients’ specifications. In this study, the instructional designer spent 164.33 hours (19%) as a manufacturer. For instance, he completed specific tasks associated with a particular ID project such as inserting an image into a PowerPoint

presentation, creating a new Adobe Connect account, assisting a faculty member with his Sakai course site, and other similar activities.

**Trainer.** The instructional designer also demonstrated a trainer role for 3.2% of the time. This trainer role is the conventional role of training faculty and other stakeholders. During this study, he trained faculty members and staff to use Turning Point software and trained MPA students, faculty and staff on how to effectively use social media to extend the reach and impact for their program and initiatives.

### **Instructional Designer’s Collaboration with Clients**

Twenty-nine clients completed the questionnaire for a 50.9% return rate. The clients evaluated their collaboration with the instructional designer as either being *Very effective* (62.1%; n=18), *Effective* (34.5%; n=10) or *Neither effective nor ineffective* (3.4%; n=1). There was a variety of responses on the amount of time spent with the instructional designer. More than twenty percent of the clients interacted with the instructional designer monthly (20.7%; n=6) or every “two or three months” (27.6%; n=8). Five clients (17.2%) interacted with the instructional designer at least weekly and four clients (13.8%) interacted with the instructional designer every other week.

The clients commented on their respective interactions with the instructional designer. Several positive aspects in working with the instructional designer are described with the following characteristics: flexibility, collaboration, and listening. One respondent observed the instructional designer’s flexibility by noting his “willingness to shuffle schedules in order to meet very tight deadlines” and another client remarked that the instructional designer “is flexible and can adapt to changing needs from the team providing content”. The instructional designer’s collaborative skills also were highlighted. One respondent wrote, “If I have a vision in mind—even just a sketch—the instructional designer is generally able to help me convert it into a finished product.” There is a discernible, trusting relationship between the instructional designer and his clients. A respondent remarked, “Because we have worked on several projects together over the years, we have a good understanding of each other’s strengths and weaknesses. We also trust each other. It makes for a good working relationship.” The instructional designer not only establishes a collaborative and trusting relationship, but also offers valuable advice and guidance. A faculty member wrote, “My PowerPoint went from being very bland to much more engaging and dynamic. The presentation went well and my client group gave very good feedback on their evaluation forms.” The instructional designer also has commendable listening skills. One client noted “his ability to listen and help me

design a webinar within parameters of what we can do but also his general ‘can-do’ attitude toward new projects.”

As shown in Figure 4, the instructional designer ranked his collaboration with his clients as being *tremendous* for an overwhelming amount of the time (78.1%). Only more than 10% of his time was spent with *no* collaboration (2.7%) or *little* collaboration (7.5%) with his clients. Almost all of the webinar, e-learning module, and social media design activities involved either a *tremendous* amount or *a lot* of collaboration with clients. The instructional designer completed only one e-learning module individually without any interaction with faculty members. The instructional designer rated all of the e-learning and LMS support activities as being *no* or *little* collaboration. Some of the other support activities (i.e., course support, just-in time support, and social media support) did involve a *tremendous* amount of collaboration with faculty members, such as working closely with a faculty member on a particular project. However, the instructional designer rated other course, just-in time, and social media support activities as involving *little* or *no* collaboration. These lowly ranked activities were a result of limited to no faculty involvement where the faculty member told

the instructional designer what needed to be completed and the instructional designer independently completed the task.

There also were similar patterns with instructional designer’s role and the amount of collaboration with his clients. As can be expected, the instructional designer’s counselor-like activities were ranked as involving a *tremendous* amount of collaboration. Most of the instructional designer’s instructional architect, instructional artist, and instructional engineer activities involved either a *tremendous* amount or *a lot* of collaboration. There were mixed ratings for his instructional craftsperson and instructional manufacturer activities. Three of the instructional craftsperson activities did not include any direct involvement with a client. The instructional designer was assigned a task and individually proposed a craftsperson-like solution in order to complete this particular task. The instructional designer rated fourteen instructional manufacturer activities as involving a *tremendous* amount or *a lot* of collaboration with his clients. Even though the instructional designer completed a manufacturer-type of task (e.g., making changes to a PowerPoint presentation’s timing), he worked closely with the faculty member to make sure the task was completed successfully.

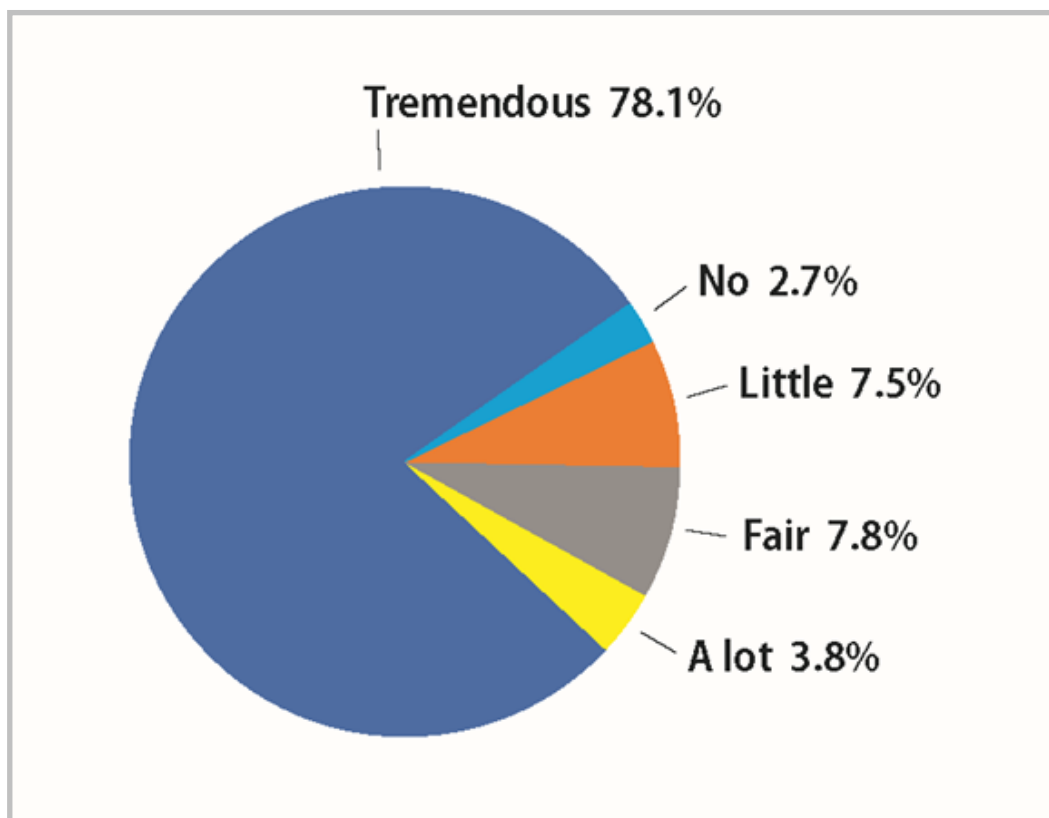


Figure 4. Percentage of time spent in collaborating with clients.



## Discussion

The goal of this study was to document an instructional designer's activities and interactions with his clients. The study also conceptualized ID roles proposed by Hokanson and Miller (2009) and Authors Sugar and Betrus (2002) into actual ID practices. The results of this case study can establish a baseline of types of ID activities, ID roles, and an understanding of instructional designers' collaborative relationship with clients.

Any interpretation of these results should be assessed with regards to the limitations of this study. The most apparent limitation of this case study is that it documents the activities of one instructional designer. The next step in this type of analysis would be to expand the investigation to include more instructional designers and to question whether this set of interactions is generalizable beyond this one study of an instructional designer's activities within a higher education setting and other instructional design settings (e.g., corporate, military). A survey of instructional designers' ID activities (i.e., design, support, and production), as well as their respective ID roles (e.g., instructional architect, instructional craftsperson, etc.) can provide additional insights on these instructional designers' activities and roles. This analysis and breakdown of these activities and roles also beg the question of whether one can develop a taxonomy or hierarchy of instructional designer activities and roles that is similar to Bloom, Engelhart, Furst, Hill, and Krathwohl's (1956) taxonomy of educational objectives.

This analysis and description of specific ID roles in this case study encourages one to evaluate existing Instructional Design and Technology (IDT) curricula and whether students are being properly prepared to serve in these roles. For instance, how do IDT educators prepare future instructional designers to be effective instructional architects? How do IDT courses develop creative skills so that students can be effective instructional artists? As demonstrated in this case study, instructional designers also need to maintain a balance of an ID activities (e.g., between design and support activities) and ID roles (e.g., instructional craftsperson and instructional manufacturer). Understanding these relationships between ID activities and ID roles and promoting these roles would provide further clarification on how to become a successful instructional designer.

Moreover, the instructional designer commented on his conscious effort to establish relationships with his clients. He deliberately sought ways to encourage his clients to contact him about completing additional ID projects. His just-in time support activities and hallways consultations were an example of this initiative. A future research question can further examine the various

client relationships that an instructional designer initiates, establishes and maintains with his or her clients. One can consider this phenomenon as well as effective ways to develop the aforementioned ID roles by using a design-based research approach (Anderson & Shattuck, 2012; Richey & Klein, 2007).

In conclusion, this study provided additional insight on an instructional designer's current practices, specifically his ID activities, ID roles, and collaboration with his clients. These results can be added to the established studies of instructional designers' practices and offer an understanding of the relationship between an instructional designer's activities, roles, and collaboration.

## References

- Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research? *Educational Researcher*, 41(1), 16-25.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals*. Handbook I: Cognitive domain. New York: David McKay Company.
- Campbell, K., Schwier, R. A., & Kenny, R. (2006). Conversation as inquiry: A conversation with instructional designers. *Journal of Learning Design*, 1(3), 1-18.
- Chen, W., Moore, J. L., & Vo, N. (2012). Formative evaluation with novice designers: Two case studies within an online multimedia development course. *International Journal of Instructional Media*, 39(2), 95-111.
- Creswell, J.W. (2009). *Research design: Qualitative, quantitative and mixed methods approaches (3rd ed.)*. Los Angeles, CA: Sage.
- Dicks, D., & Ives, C. (2008). Instructional designers at work: A study of how designers design. *Canadian Journal of Learning and Technology*, 34(2).
- Foreman, P. B. (1948). The theory of case studies. *Social Forces*, 26(4), 408-419.
- Ge, X., & Hardré, P. L. (2010). Self-processes and learning environment as influences in the development of expertise in instructional design. *Learning Environments Research*, 13(1), 23-41.
- Hokanson, B., & Miller, C. (2009). Role-based design: A contemporary framework for innovation and creativity in instructional design. *Educational Technology*, 49(2), 21-28.
- Honebein, P. C., & Honebein, C. H. The influence of cognitive domain content levels and gender on designer judgments regarding useful instructional methods. *Educational Technology Research and Development*, 62(1), 53-69.

- Jin, S. H., & Boling, E. (2010). Instructional designer's intentions and learners' perceptions of the instructional functions of visuals in an e-learning context. *Journal of Visual Literacy*, 29(2), 143-166.
- Kennedy, P. E., Chyung, S. Y., Winiecki, D. J., & Brinkerhoff, R. O. (2014). Training professionals' usage and understanding of Kirkpatrick's Level 3 and Level 4 evaluations. *International Journal of Training and Development*, 18(1), 1-21.
- Klein, J. D., & Jun, S. (2014). Skills for instructional design professionals. *Performance Improvement*, 53(2), 41-46.
- Loughner, P., & Moller, L. (1998). The use of task analysis procedures by instructional designers. *Performance Improvement Quarterly*, 11(3), 79-101.
- Magliaro, S. G., & Shambaugh, N. (2006). Student models of instructional design. *Educational Technology Research and Development*, 54(1), 83-106.
- Miller, C., & Hokanson, B. (2009). The artist and architect: Creativity and innovation through role-based design. *Educational Technology*, 49(4), 18-27.
- Pan, C., & Thompson, K. (2009). Exploring dynamics between instructional designers and higher education faculty: An ethnographic case study. *Journal of Educational Technology Development and Exchange*, 2(1), 33-52.
- Perkins, R. A. (2009). Context-oriented instructional design for course transformation. *New Directions for Teaching and Learning*, 2009(118), 85-94.
- Rapanta, C., Maina, M., Lotz, N., & Bacchelli, A. (2013). Team design communication patterns in e-learning design and development. *Educational Technology Research and Development*, 61(4), 581-605.
- Richey R., & Klein, J. (2007). *Design and development research: Methods, strategies and issues*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Sheehan, M. D., & Johnson, R. B. (2012). Philosophical and methodological beliefs of instructional design faculty and professionals. *Educational Technology Research and Development*, 60(1), 131-153.
- Sugar, W. (2014). *Studies of ID practices: A review and synthesis of research on ID current practices*. New York: Springer.
- Sugar, W. & Betrus, A. (2002). The many hats of an instructional designer: The development of an instructional card game. *Educational Technology*, 42(1). 45-51.
- Sugar, W., Brown, A., Daniels, L., Hoard, B. (2011). Instructional Design and Technology professionals in higher education: Multimedia production knowledge and skills identified from a Delphi study. *Journal of Applied Instructional Design*, 1(2), 30-46.
- Tracey, M., Hutchinson, A., & Grzebyk, T. (2014). Instructional designers as reflective practitioners: Developing professional identity through reflection. *Educational Technology Research and Development*, 62(3), 315-334.
- Tracey, M., & Unger, K. (2012). A design-based research case study documenting a constructivist ID process and instructional solution for a cross-cultural workforce. *Instructional Science*, 40(3), 461-476.
- Wedman, J., & Tessmer, M. (1993). Instructional designers decisions and priorities: A survey of design practice. *Performance Improvement Quarterly*, 6(2), 43-57.
- Williams, D. D., South, J. B., Yanchar, S. C., Wilson, B. G., & Allen, S. (2011). How do instructional designers evaluate? A qualitative study of evaluation in practice. *Educational Technology Research and Development*, 59(6), 885-907.
- Yanchar, S. C., South, J. B., Williams, D. D., Allen, S., & Wilson, B. G. (2010). Struggling with theory? A qualitative investigation of conceptual tool use in instructional design. *Educational Technology Research and Development*, 58(1), 39-60.
- Yin, R. (2014). *Case study research: Design and methods*. (5<sup>th</sup> ed.). Thousand Oaks, CA: Sage Publications.