The Business of Informal Learning: A Survey of Instructional Design and Performance Improvement Practitioners

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THE BUSINESS OF INFORMAL LEARNING:
A SURVEY OF INSTRUCTIONAL DESIGN AND
PERFORMANCE IMPROVEMENT PRACTITIONERS

By

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For my father, mother, and brother who encourage me to
“do well, learn, behave, and have fun.”
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In all my prayers for all of you, I always pray with joy.

Philippians 1:3–4
# TABLE OF CONTENTS

List of Tables ................................................................................................................................... vii
List of Figures ................................................................................................................................... viii
Abstract ........................................................................................................................................... ix

1. INTRODUCTION .....................................................................................................................1
   - Informal Workplace Learning ..............................................................................................1
   - Instructional Design and Performance Improvement ......................................................... 3
   - Purpose of the Study ............................................................................................................ 3
   - Research Questions ............................................................................................................. 4
   - Significance of the Study ..................................................................................................... 4

2. LITERATURE REVIEW ..........................................................................................................5
   - Workplace Learning ............................................................................................................. 5
     - Formal and Informal Learning ......................................................................................... 6
   - Informal Workplace Learning ............................................................................................ 7
     - Informal Learning ............................................................................................................. 8
     - Benefits of Informal Workplace Learning ..................................................................... 9
     - Types of Informal Workplace Learning Activities ....................................................... 9
     - Supports of Informal Workplace Learning ..................................................................... 18
   - Instructional Design and Performance Improvement ....................................................... 26
     - Informal Learning in Instructional Design and Performance Improvement ................... 27
   - Purpose of the Current Study ............................................................................................ 28

3. METHOD ..................................................................................................................................29
   - Research Design .................................................................................................................... 29
   - Participants ............................................................................................................................. 30
   - Instrumentation ..................................................................................................................... 34
     - Part 1: Survey Form ........................................................................................................... 34
     - Part 2: Interview Protocol ................................................................................................ 36
   - Procedures .............................................................................................................................. 36
     - Formative Evaluation of Instruments ............................................................................. 36
   - Data Collection ....................................................................................................................... 37
   - Data Analysis Methods ......................................................................................................... 39
     - Reliability ........................................................................................................................... 42
     - Generalizability .................................................................................................................. 42
     - Trustworthiness .................................................................................................................. 42
   - Significance of the Research ............................................................................................... 44
4. RESULTS ................................................................................................................................45

The Practitioner................................................................................................................................45
Research Question 1: What types of informal learning activities do ID/PI practitioners facilitate in their organization? ..........................................................................................................................45
Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization? ......................................................................................................................46

The Organization .....................................................................................................................54
Research Question 3: What environmental factors do organizations provide to facilitate informal learning? ..............................................................................................................54
Research Question 4: How do organizations facilitate informal learning among their employees? .................................................................................................................55

5. DISCUSSION ..........................................................................................................................67

The Practitioner........................................................................................................................67
The Organization .....................................................................................................................69
Limitations ..................................................................................................................................72
Implications ...............................................................................................................................74
  Internal Culture ..................................................................................................................74
  Resources and Tools ..........................................................................................................74
  Physical Environment ........................................................................................................75
  Recommendations for ID/PI Practitioners .........................................................................76
Significance of the Study and Future Research .......................................................................77

APPENDICES ...............................................................................................................................79

A. SURVEY INSTRUMENT .......................................................................................................79
B. COVER LETTERS .................................................................................................................86
C. INTERVIEW PROTOCOL AND SCRIPT ..............................................................................88
D. IRB APPROVAL LETTERS ...................................................................................................91
E. REMINDER COVER LETTERS ............................................................................................93
F. TRACKING SPREADSHEET FOR SURVEY RESPONSES .................................................95
G. TRACKING SPREADSHEET FOR INTERVIEW SCHEDULES ...........................................97
H. CODING FORM ......................................................................................................................98
I. RESEARCH QUESTION 2: FULL BREAKDOWN OF SURVEY AND INTERVIEW RESULTS ..........................................................................................................................101
J. RESEARCH QUESTION 4: FULL BREAKDOWN OF SURVEY AND INTERVIEW RESULTS ..........................................................................................................................104

REFERENCES ...........................................................................................................................106

BIOGRAPHICAL SKETCH .......................................................................................................114
# LIST OF TABLES

1. Breakdown of survey respondent demographic information ..................................................30
2. Demographic information of each interviewee ........................................................................32
3. Breakdown of interviewee demographic information .............................................................33
4. Breakdown of the interviewee selection, recruitment, and confirmation process .................39
5. Research Question 1: Breakdown of survey responses ...........................................................45
6. Research Question 2: Breakdown of interview responses .......................................................48
7. Research Question 3: Breakdown of survey responses ...........................................................54
8. Research Question 4: Breakdown of interview responses .......................................................57
LIST OF FIGURES

1 Portion of the practitioner-level matrix item of the informal learning survey .........................35

2 Portion of the organizational-level matrix item of the informal learning survey ........................35
ABSTRACT

Professionals engaged in work continuously confront situations and tasks that require the acquisition of new knowledge and skills. The workplace has been acknowledged as an environment rife with learning opportunities; employees continually construct and apply knowledge within an authentic context (Billet, 1995). Both formal and informal learning contribute to workplace learning (Brockman & Dirks, 2006; Choi & Jacobs, 2011; Ellinger, 2005). Frequently required, devised, and implemented by organizations, formal training programs involve structured and intentional learning. Informal learning, however, entails individuals seeking and engaging in unstructured, learner-directed, and sometimes spontaneous activities to gain tacit or explicit knowledge and experience (Dennen & Wang, 2002; Jacobs & Park, 2009; Marsick & Volpe, 1999). Although workplace learning consists of both formal and informal learning, the majority of learning that occurs in the workplace is informal, rather than formal (Ellinger, 2005; Lohman, 2000; Marsick & Watkins, 2001). Informal learning is so prevalent in the workplace that the reported ratio of formal to informal learning highly favors informal, sometimes as steeply at 10% to 90% (Cross, 2013; Lohman, 2003; Marsick & Watkins, 1990).

Within the workplace, the discipline of instructional design and performance improvement (ID/PI) focuses on supporting professionals’ learning and performance needs. As a result, the majority of organizational resources devoted to learning are allocated to more formal means, such as training and workshops (Ellinger, 2005; Lohman, 2000; Marsick & Watkins, 2001). Given that the majority of learning among employees is more informal than formal in nature, and also that the role of ID/PI practitioners is to ensure support of those employees, an interesting connection between ID/PI and informal workplace learning appears (Klein & Moore, 2016). However, despite the exciting potential of this intersection, the connection between ID/PI practitioners and informal learning has not received much attention from researchers.

Only two empirical studies have intersected the fields of ID/PI and informal learning, and both have done so by addressing the informal workplace learning of ID/PI practitioners. Berg and Chyung (2008) focused on the informal workplace learning of performance improvement professionals, but did not explain why they chose this population or how this group of practitioners may utilize informal learning strategies to support their clients. More recently,
Yanchar and Hawkley (2014) explored the informal learning that occurred during design work among an ID/PI team, but again did not explore if the team incorporated informal learning into the services provided to clients.

The purpose of this study was to investigate the perception of informal learning strategies among ID/PI practitioners on two levels: the practitioner (professionals facilitating informal learning) and the organization (an entity supporting informal learning among employees). Four research questions, aligning with the two levels of inquiry, guided this study:

- The practitioner:
  - Research Question 1: What types of informal learning activities do ID/PI practitioners facilitate in their organization?
  - Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

- The organization:
  - Research Question 3: What environmental factors do organizations provide to facilitate informal learning?
  - Research Question 4: How do organizations facilitate informal learning among their employees?

The two-part study consisted of an online survey and follow-up interviews with current ID/PI practitioners. Respondents to the survey included 385 practitioners (37% men, n=143; 64% women, n=241), of which 20 volunteers participated in 1-on-1 interviews.

The results from both survey and interview data indicated that ID/PI practitioners predominantly share knowledge to facilitate informal learning. Results also indicated that organizations facilitate informal learning among employees through the internal culture, resources and tools, and physical workspace. For example, regarding the physical workspace, a workplace with open architectural features that encourage employee interaction (shared desks, low cubicle partitions, or common lounge areas) is conducive to informal learning. As proponents of learning, ID/PI practitioners may leverage organizations’ environmental factors to facilitate informal learning among employees.
CHAPTER 1

INTRODUCTION

Professionals engaged in work continuously confront situations and tasks that require the acquisition of new knowledge and skills. Due to the extent of learning throughout the workplace, many believe learning to be a key portion of job performance (Barnett, 1999; Boud & Middleton, 2003; Eraut, 2004). *Workplace learning*, the term used throughout the literature, is unique from other forms of learning and demands specific attention by scholars and practitioners (Brockman & Dirkx, 2006).

Contributing to workplace learning are both formal and informal learning (Boud & Middleton, 2003; Brockman & Dirkx, 2006; Choi & Jacobs, 2011; Ellinger, 2005; Livingstone, 2001). Whereas formal learning consists of structured, planned sessions of instruction delivered to individuals, *informal learning* involves individuals seeking unstructured, often spontaneous or unacknowledged, activities to gain knowledge or skill (Dennen & Wang, 2002; Jacobs & Park, 2009; Marsick & Volpe, 1999). Even though both forms of learning comprise workplace learning, the more prevalent of the two is informal, despite the majority of organizational resources being allocated to more formal efforts (Berg & Chyung, 2008; Boud & Middleton, 2003; Brockman & Dirkx, 2006; Cross, 2007; Ellinger, 2005; Livingstone, 2001; Lohman, 2000; Marsick & Watkins, 2001; Skule, 2004).

**Informal Workplace Learning**

Informal workplace learning offers multiple benefits; professionals can develop expertise in relevant tasks and knowledge, and organizations may cultivate a sound workforce (Rothwell & Kazanas, 2008; van Rijn, Yang, & Sanders, 2013). Additionally, informal workplace learning frequently does not require time away from work tasks or extra travel and registration fees. Instead, professionals often engage in informal learning by seamlessly initiating and ceasing informal learning activities while simultaneously executing normal work tasks (Hoffman, 2005). Such natural incorporation within a work routine serves to ensure that the resulting learning is meaningful and more permanent, whereas formal training may not guarantee transfer to the place of work (Billet, 1999; Brockman & Dirkx, 2006; Burns, Schaefer, & Hayden, 2005; Garrick, 1998).
Within the workplace, informal learning can manifest in a plethora of ways. For example, Watkins and Cervero (2000) compiled a list of 31 work and learning opportunities, 26 of which are informal. Lohman (2005) later identified eight activities of informal workplace learning, which include talking, collaborating, and sharing materials and resources with others. Similarly, Noe, Tews, and Marand (2013) presented a list of nine informal workplace learning activities, organized into the three overarching categories of learning from oneself, others, and non-interpersonal sources. Although a comprehensive catalogue of all types of informal learning is not probable (items of such a list are infinite), a list of informal actions that accurately addresses the components of informal learning and provides specific information would benefit theory and practice. For example, future researchers could use such a list as a starting point for other studies of informal workplace learning, then revise the list accordingly based on the specifications and needs of their study context. Additionally, ID/PI practitioners may refer to the list for guidance in supporting their teams and clients through informal workplace learning.

Certain characteristics specific to individuals and workplace environments, in addition to the type of information or skills sought after, influence the occurrence of informal learning activities. Several scholars have investigated the factors that encourage or discourage informal learning, but results are often contradictory. For example, an individual’s age (Berg & Chyung, 2008; Tikkanen, 2002; Kremer, 2005; Smith & Smith, 2008; Stowe, 2012), educational background (Berg & Chyung, 2008; Smith & Smith, 2008; van Rijn et al., 2013), and motivation (Berg & Chyung, 2008; Choi & Jacobs, 2011; Dunn, 2009) have emerged as personal characteristics that sway the types of informal learning activities engaged in and to what extent. Similarly, the environmental factors of access to coworkers (Lohman, 2005; Mariani, Curcuruto, & Gaetani, 2013; Svensson, Ellström, & Åberg, 2004; Wofford, 2011) and work tools and resources (Mariani et al., 2013; Svensson et al., 2004), time for learning/flexible schedule (Dunn, 2009; Lohman, 2005; Mariani et al., 2013; Svensson et al., 2004; Wofford, 2011), management attitude (Choi & Jacobs, 2011; Dunn, 2009; Ellinger & Cseh, 2007), and internal culture (Choi & Jacobs, 2011; Ellinger, 2005; Lohman, 2005; Marsick & Watkins, 2001; Twidale, 2005) also have been found to encourage informal learning. Consequently, researchers have called for further exploration of the relationships between such individual and environmental characteristics and informal learning activities (Berg & Chyung, 2008; Choi & Jacobs, 2011; Ellinger & Cseh, 2007). The current study will devote additional attention to these factors, as
well as others to be identified below, and will contribute further insight to the existing scholarship on these topics.

**Instructional Design and Performance Improvement**

Within the workplace, the discipline of instructional design and performance improvement (ID/PI) focuses on supporting professionals’ training and performance needs. Practitioners of ID/PI engage in systemic and systematic processes to plan and create effective, efficient, and elegant instructional and non-instructional interventions (International Board of Standards for Training, Performance and Instruction, 2012; Richey, Klein, & Tracey, 2011; Smith & Ragan, 2004). Given that the majority of learning among employees is more informal than formal in nature, and also that the main role of ID/PI professionals is to ensure support of those employees, an interesting scenario involving the connection between ID/PI and informal workplace learning appears (Klein & Moore, 2016).

Only two sets of researchers have considered informal learning from the perspective of ID/PI practitioners (Berg & Chyung, 2008; Yanchar & Hawkley, 2014). For example, Berg and Chyung (2008) seem to be the first to focus on the informal workplace learning of performance improvement professionals, but failed to explain why they chose this population for their study and how this group of practitioners may utilize informal learning strategies to support their clients. More recently, Yanchar and Hawkley (2014) explored the informal learning that occurred during design work among an ID/PI team, but did not broach the topic of how the team may encourage informal learning among clients.

Although empirical studies focused on informal workplace learning are growing in number, research projects dedicated to investigating informal learning from the perspectives of ID/PI practitioners are still scarce. Contexts of ID/PI work often vary, occurring within K–12, university, corporate, government, and military settings with teams of varying sizes, resources, clients, and goals—thus mandating additional research efforts (Yanchar & Hawkley, 2014). Moreover, how ID/PI practitioners integrate informal learning to support client training and performance needs also requires attention from researchers since no such work has yet been conducted to date.

**Purpose of the Study**

The purpose of this research study was to explore the informal workplace learning of ID/PI practitioners on two levels: the practitioner (ID/PI practitioners facilitating informal
learning within their organizations) and the organization (how ID/PI practitioners see their organization facilitating informal workplace learning).

**Research Questions**

Four research questions, aligning with the two levels of investigation described earlier, guided the study:

- **The practitioner:**
  - Research Question 1: What types of informal learning activities do ID/PI practitioners facilitate in their organization?
  - Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

- **The organization:**
  - Research Question 3: What environmental factors do organizations provide to facilitate informal learning?
  - Research Question 4: How do organizations facilitate informal learning among their employees?

**Significance of the Study**

The amount of empirical research devoted to informal workplace learning is growing. However, several scholars have called for additional studies of informal workplace learning, specifically in diverse industries among different populations of professionals (Froehlich, Segers, & Van den Bossche, 2014; van Rijn et al., 2013; Wofford, Ellinger, & Watkins, 2012). To date, only a few studies have explored the informal learning of ID/PI practitioners. Therefore, the study will contribute further insight into the informal workplace learning of a group of professionals who rarely receive attention. In so doing, this project will also add to the literature bases of ID/PI and informal learning, especially regarding how these two topics intersect. In order to meet these goals, an overall list of informal workplace learning activities will emerge, as will clarification of the individual and organizational factors that influence informal workplace learning. The study will be an important addition to the field in that it will draw on theories and established evidence to generate further insight.
CHAPTER 2
LITERATURE REVIEW

The purpose of this chapter is to provide an overview of informal learning in the workplace. In addition, the role of instructional design and performance improvement (ID/PI) practitioners in this context will be addressed, as will the influence of individual and organizational factors on informal workplace learning. First, a background of workplace learning will be presented, which will then shift to focus on informal learning that occurs specifically in this context. Next, there is a review of literature regarding informal learning activities occurring in workplace settings and the various personal and environmental characteristics that make these events successful. Finally, this chapter will address the influence of instructional design and performance improvement (ID/PI) professionals on informal learning within the workplace.

Workplace Learning

Across industries and fields of practice, an important facet of professionals’ activities and responsibilities involves learning. Individuals working in professional settings constantly interact with peers and content matter, which continually exposes them to new knowledge, skills, and situations (Eraut, 2004). So pervasive is learning within the workplace, that some consider learning an innate aspect of job performance (Barnett, 1999; Boud & Middleton, 2003; Eraut, 2004). Warhurst (2012) extended the idea that learning in the workplace is not so much a byproduct of work, but that the two can be considered as paired outcomes. The workplace has been acknowledged as an environment rife with learning opportunities, in that employees continually construct and apply knowledge within an authentic context (Billet, 1995, 1999). In the literature, this form of learning is called workplace learning and, due to employees’ distinct business context and objectives, it demands specific attention (Brockman & Dirkx, 2006).

Scholarly attention to workplace learning increased in the late 1990s (Boud & Garrick, 1999; Ellinger, 2005), which has resulted in greater consideration and understanding for what constitutes the concept. Watkins and Marsick (1992) view workplace learning as manifesting in three different forms: formal, informal, and incidental, with incidental often considered a branch of informal learning. To Barnett (1999), the processes of learning and working were one entity and could not be separated. Billett (2001) described workplace learning as a practice in which the
work being performed dictates what is learned, thus providing a natural structure for learning. Similarly, Sambrook (2006) presented the viewpoint that workplace learning manifests in two ways: learning at work (planned, formal training sessions) and learning in work (embedded, informal activities), with a third possibility for learning outside work (extending past the physical boundaries of the workplace setting). Workplace learning to Jacobs and Park (2009) is a process in which individuals engage in various types of learning events to gain competencies and meet job goals. Also, these authors addressed workplace learning at the individual and organizational levels, and explained that such professional development can improve both individual and organizational performance. Common among these definitions of workplace learning is relevancy (content and knowledge is directly related to work responsibilities and performance improvement) and a mixture between formal and informal activities.

**Formal and Informal Learning**

Both formal and informal learning contribute to workplace learning (Boud & Middleton, 2003; Brockman & Dirkx, 2006; Choi & Jacobs, 2011; Ellinger, 2005; Livingstone, 2001). Frequently required, devised, and implemented by organizations, formal training programs involve structured and intentional learning. Also, the projected output of training sessions is explicit knowledge (Burns, Schaefer, & Hayden, 2005). Informal learning, however, entails individuals seeking and engaging in unstructured, learner-directed, and sometimes spontaneous activities to gain knowledge, tacit or explicit, and experience (Dennen & Wang, 2002; Jacobs & Park, 2009; Marsick & Volpe, 1999). Additionally, with informal learning, the learners may or may not acknowledge that they are acquiring new information. Whereas formal training is usually dictated by organizations, the impetus for informal learning events occurring in the workplace can be external, such as a supervisor’s directive, or internal, as in a self-identified need for professional development (Dennen & Wang, 2002; Wofford, Ellinger, & Watkins, 2012).

Despite this contrast between formal and informal learning in the workplace, the two are entwined, and even build off of and complement each other, leading to more comprehensive knowledge seeking, sharing, and gaining (Dennen & Wang, 2002; Hung, Lee, & Lim, 2012; Jacobs & Park, 2009). Oftentimes, individuals shift seamlessly between formal and informal positions, even during just a few minutes. Finney and Philpott (2010) described the relationship between the formal and informal learning of musicians, who share the roles of knowledge
sharers and seekers, and often vacillate between formal and informal learning during practice sessions. Also, informal learning events stimulate and lead to employees pursuing formal learning activities, and vice versa (Choi & Jacobs, 2011; Lai, Wu, & Li, 2011; Svensson, Ellström, & Åberg, 2004). Therefore, formal and informal learning should not appear as conflicting, competing entities—but rather as forms of learning that share a symbiotic relationship.

Although workplace learning consists of both formal and informal learning, the majority of learning that occurs in the workplace is informal, rather than formal (Berg & Chyung, 2008; Boud & Middleton, 2003; Brockman & Dirkx, 2006; Ellinger, 2005; Livingstone, 2001; Lohman, 2000; Marsick & Watkins, 2001; Skule, 2004). Informal learning is so prevalent in the workplace that the reported ratio of formal to informal learning highly favors informal, sometimes as steeply at 10% to 90% (Cross, 2013; Daniels, 2013; Eraut, 2004, 2011; Lohman, 2003; Marsick & Watkins, 1990, 2001; Merriam, Caffarella, & Baumgartner, 2007; Sambrook, 2006). Addressing these claims empirically, Baert and Govaerts (2012) studied the learning habits of teams in Belgium who provide employment, career, and training services to their community. Through 22 interviews, the researchers indicated that learning patterns characterized by a focus on work tasks, social interactions, idea sharing, and team discussions were the most common. These public service professionals interacted and learned from their group members, gaining more expertise from informal means than formal training sessions. Similarly, Lohman (2003) interviewed 22 K–12 teachers who participated in mandatory professional development training. The majority of teachers did not consider the formal sessions applicable to their work tasks, but rather the overall benefit of the formal training program was the chance it offered to interact with peers. The teachers explained that the ensuing conversations about classroom experiences and ideas were helpful. Due to the identified focus on informal learning in the workplace, additional attention to this topic is required.

**Informal Workplace Learning**

Since the 1980s, researchers have increasingly acknowledged the role of informal learning in adult education and professional development (Brockman & Dirkx, 2006; Ellinger, 2005; Eraut, 2004). Given informal learning’s focus on authentic, as-needed, learner-driven situations, this connection with professionals working in organizations is not surprising.
Informal Learning

The phrase informal learning originated in Knowles’ (1950) work called Adult Informal Education. Knowles explored learning specific to adults and developed much of the concept of andragogy. This theory of adult learning posits that adults as a learner group exhibit unique characteristics and needs, summarized as (a) self-concept, (b) learner’s experience, (c) readiness to learn, and (d) learning orientation. When considering this nature of adult learning, the connection with informal learning is clear. Preceding Knowles’ neologism, however, the concept of informal learning received attention from other scholars and researchers. Lindeman (1926) discussed the tendency of adults to learn from everyday experiences, and Dewey (1938) supported active, lifelong learning in which knowledge is constructed from experience.

Informal learning has assumed various, yet related, definitions in the literature. Marsick and Volpe (1999) described informal learning as “learning that is predominantly unstructured, experiential and non-institutional” (p. 4), whereas Colardyn and Bjornavold (2004) evoked Knowles in that informal learning results “from daily life activities related to work, family, or leisure” (p. 71). Similarly, Livingstone (2001) explained informal learning as “any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria” (p. 4). Furthering this definition, Yanchar and Hawkley (2014) addressed informal learning as without “formal curricula and . . . instructors, syllabi, assignments, and assessments” (p. 272) and placed informal learning specifically within the context of professional development. Informal learning is also “the spontaneous and nonstructured learning that occurs in our daily life that go by in different contexts” (García-Peñalvo, Colomo-Palacios, & Lytras, 2012, p. 754). Informal learning events can also occur face-to-face between individuals, such as chatting with coworkers about a task during a coffee break, or via another medium, such as Googling how to use a new software program (Twidale, 2005). Furthermore, individuals can learn informally on their own or as part a group, synchronously or asynchronously.

In sum, scholars have proposed a myriad of definitions for informal learning. Of those presented in this review, the definition offered by Livingstone (2001), in which he describes informal learning as “any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria” (p. 4), will guide this study. This decision was based mainly on two strengths of the statement: comprehensiveness
and accessibility. First, regarding its comprehensiveness, the definition is specific enough to focus readers on the crux of the topic, yet broad enough to encompass a wide range of scenarios, needs, and activities. This comprehensiveness leads to the statement’s second strength: accessibility. Readers can understand the overall concept behind Livingstone’s explanation without difficulty—it is easy to envision a professional seeking/gaining information to a work task at hand, despite being away from instructors and classrooms. Additionally, the statement is clearly written and concise, which also adds to its accessibility.

**Benefits of Informal Workplace Learning**

Informal learning that occurs in the workplace can benefit professionals and organizations in several ways. On the individual level, informal learning strengthens long-term employability of personnel by providing experience in managing ongoing change (van Rijn, Yang, & Sanders, 2013). This, in turn, leads to gains for the organization. As individuals acquire expertise via informal means, a robust collective knowledge develops throughout an organization’s workforce. Further, van Rijn et al. (2013) mentioned that informal learning avoids costs associated with formal workshops and training. Such formal learning events have the potential to decrease productivity—employees abandon their immediate tasks to attend training programs and, on top of this lost work time, organizations devote additional funds to pay travel, training, and registration fees (van Rijn et al., 2013). When employees are not required to leave their workplace to attend such programs, work tasks continue uninterrupted and learning that is inherently relevant to work responsibilities occurs simultaneously (Hoffman, 2005).

Additionally, concern exists regarding the transfer of learning from formal training to job performance (Billet, 1999; Brockman & Dirkx, 2006; Burns et al., 2005; Garrick 1998). Brockman and Dirkx (2006) explained that formal training programs may not ensure that employees will apply new skills and knowledge presented during training when they return to their work tasks. Informal learning, however, with its as-needed and just-in-time aspect, serves to solve performance issues as required (Twidale, 2005), and also allows the individual to determine the most appropriate method for gaining the necessary knowledge.

**Types of Informal Workplace Learning Activities**

Informal learning can occur in a variety of ways in the workplace and scholars often discuss informal learning through lists of possible activities. For instance, van Rijn et al. (2013) described informal learning by offering examples, including gaining new knowledge, skills, and
abilities through reading a book or article, asking others for help and feedback, and sharing knowledge with others. Similarly, Cross (2007) explained that people “discover how to do their jobs through informal learning: asking the person in the next cubicle, trial and error, calling the help desk, working with people in the know, and joining the conversation” (p. xix). While such descriptions are helpful, other researchers have empirically investigated what types of activities comprise informal learning in the workplace among professionals.

After conducting a series of surveys and case studies with K–12 teachers (Lohman, 2000, 2003; Lohman & Woolf, 2001), Lohman (2005) established eight types of informal workplace learning activities:

• Talking with others,
• Collaborating with others,
• Observing others,
• Sharing materials and resources with others,
• Searching the Internet,
• Scanning professional magazines and journals,
• Engaging in trial and error, and
• Reflecting on one’s actions. (p. 508)

Lohman (2005, 2006, 2009) has applied this list to professionals in various fields, including public school teachers, HRD practitioners, and information technology specialists. Most applicable to the current study, Lohman (2005) surveyed HRD professionals regarding their engagement in these eight activities and found (a) observing others, (b) searching the Internet, and (c) scanning professional magazines and journals were most common among this group.

While this list is useful and contributes to later research (Berg & Chyung, 2008; Choi & Jacobs, 2011; Dunn, 2009; Moore & Klein, 2015), the eight items may be too general. “Searching the Internet,” for example, is vague and can encompass a multitude of tools, actions, and purposes. Additionally, Moore and Klein (2015) referred to Lohman’s eight informal learning activities when surveying instructional design and technology graduate students regarding their informal learning. When the six-week data collection period concluded, 44 of the 466 respondents had typed in activities via open-ended textboxes of the survey form to
supplement the eight informal learning activities listed in the instrument. Examples of these suggestions included:

- Attending/presenting at conferences,
- Watching videos online,
- Engaging with others via social media,
- Training/teaching others,
- Sharing ideas with others across disciplines,
- Receiving/providing feedback, and
- Participating in mentorships.

While it can be assumed that the respondents who submitted these additional activities believed them to exceed the scope of the listed eight informal learning activities, it seems more likely, however, that Lohman’s eight informal learning activities are broad enough to encompass the additional submissions, and the open-ended entries are simply more refined examples of the eight. Nevertheless, these open-ended responses are not superfluous, as they serve to elucidate the eight overarching informal learning activities. Therefore, a more detailed catalogue of informal workplace learning activities is necessary to provide information of greater value.

Watkins and Cervero (2000) investigated the workplace learning of certified public accountants (CPAs) and developed a survey based on their previous research, resulting in a comprehensive list of 31 work and learning opportunities. Of these 31 list items, 26 fell into categories of informal (9) or incidental learning (17), as listed below. The researchers distributed the survey list of activities to CPAs, and respondents indicated that they engaged in 20 of the 26 total informal or incidental learning opportunities in their work settings. The 26 informal and incidental learning opportunities comprising the survey instrument appear below (with italics denoting the six activities in which participants did not engage):

- A library with professional journals and books,
- Membership dues to support networking with other CPAs around professional practice issues and emerging trends affecting the profession,*
- Formal mentoring from supervisors on professional and career development,*
- Performance planning – getting performance expectations from supervisors based on strategic organizational goals,
- Performance planning – getting performance expectations from clients,*
• Performance planning – setting performance objectives for personal development needs,
• Computerized information bases to support your work,
• Job aids, checklists, tools, etc. from peers, supervisor,
• Structured critiquing sessions on one’s own or others’ work with peers or supervisors,
• Observing supervisor in the process of performing tasks,
• Observing peers in the process of performing tasks,
• Seeing models of “best practice” audits, other finished products,
• Working with supervisor on joint tasks,
• Working with peers on joint tasks,
• Working on new projects, working with new clients,
• Getting performance feedback from supervisors,
• Getting performance feedback from peers,*
• Getting performance feedback from clients,*
• Sharing “war stories” or other problematic situations with peers or supervisors,
• Getting tips on how to complete a task from peers or supervisors,
• Problem solving with peers or supervisors,
• Reviewing errors or unexpected occurrences with peers or supervisors,
• Reviewing the development or history of task procedures or conditions,*
• Identifying and discussing best practices used in other organizations,*
• Discussing quality improvement suggestions with peers, supervisors, and
• Reviewing significant trends, new tax laws, and other issues which may affect professional practice with peers, supervisors. (p. 190–191)

It is interesting to note that within the inclusive list of workplace learning activities compiled by Watkins and Cervero, only five constitute formal learning events, with the other 26 representing more informal means. This ratio reinforces the claims that informal learning is dominant in the workplace, not just by the number of potential learning activities, but also by the amount of time professionals devote to the activities.

Later, Noe, Tews, and Marand (2013) compiled a list of informal workplace learning activities of restaurant managers to measure the influence of individual differences on informal learning. Their list of nine activities, organized into three overarching categories, included:
• Learning from oneself
  o Reflecting about how to improve my performance,
  o Experimenting with new ways of performing my work,
  o Using trial and error strategies to learn and better perform,
• Learning from others
  o Interacting with a mentor,
  o Interacting with my supervisors,
  o Interacting with my peers,
• Learning from non-interpersonal sources
  o Reading professional magazines and vendor publications,
  o Searching the Internet for job relevant information, and
  o Reading management books. (p. 331)

More recently, a research team with the eLearning Guild (2014) invited members to complete their *Informal Learning in the Workplace Survey*, and item #7 asked respondents “What does informal learning look like inside your organization?” The online instrument displayed the following list of 32 informal learning activities:
• Action learning-type activities (e.g., working with others to explore solutions to real problems and deciding on actions);
• Attending conferences;
• Coaching by non-specialist coaches;
• Collaboration with colleagues;
• Communities of practice;
• Conversations with colleagues/co-workers;
• Discussion with supervisor/manager;
• Individual or team blogging;
• Individual or team reflective practice (e.g., working out loud: blogging about learning experiences, sharing experiences on enterprise social network);
• Informal mentoring;
• Knowledge sharing;
• Observations;
• Peer to peer coaching;
• Personal learning networks (PLN);
• Project reviews (e.g., working out loud; sharing process and results);
• Reading blogs and feeds;
• Reading manuals and/or reference materials;
• Reading professional journals and/or magazines;
• Recording and sharing experiences;
• Replacing formal learning entirely with informal approaches (e.g., building a community of practice instead of an online course);
• Resource sharing;
• Self-organized individual learning;
• Social networking;
• Storytelling;
• Trial and error;
• Using the Web;
• Using informal approaches within a formal course or for pre- or post-training (e.g., having a live Twitter chat as part of the program);
• Watching videos;
• Water cooler encounters;
• Work/job shadowing;
• Work observations; and
• Working out loud (e.g., explaining how you did something).

Therefore, drawing from the work of Lohman (2005); Watkins and Cervero (2000); Noe, Tews, and Marand (2013); the eLearning Guild (2014); and Moore and Klein (2015), as well as the environmental factors explored later in this literature review, the following is a comprehensive list of informal learning activities that occur in a variety of workplaces. Two points regarding this list should be noted: these items were transformed to actions to match the
activity aspect of the informal learning events list, and activities that are repeated in the multiple lists above appear below only once:

- Reading professional journals, magazines, and books;
- Reading management books;
- Reading manuals and/or reference materials;
- Using job aids, checklists, tools, etc.;
- Watching videos;
- Using computerized information bases to support your work;
- Searching the Internet for job-relevant tasks;
- Using social media (e.g., engaging with others, reading blogs/feeds, blogging as an individual/team);
- Engaging in self-organized individual learning;
- Sharing materials, resources, and knowledge;
- Sharing ideas across disciplines;
- Engaging in social networking;
- Participating in communities of practice;
- Utilizing personal learning networks (PLN);
- Paying membership dues to support networking;
- Attending/presenting at conferences;
- Participating in mentoring (e.g., formal/informal, mentoring someone/being mentored);
- Participating in coaching (e.g., coaching someone/being coached);
- Receiving performance expectations from supervisors;
- Receiving performance expectations from clients;
- Setting personal performance expectations/objectives;
- Interacting (e.g., talking, collaborating) with supervisors;
- Interacting (e.g., talking, collaborating) with peers;
- Engaging in water cooler encounters;
- Sharing “war stories” or other problematic situations with peers or supervisors;
- Recording and sharing experiences/storytelling;
- Participating in work/job shadowing (e.g., shadowing someone/being shadowed);
• Training/teaching others;
• Observing supervisors in the process of performing work tasks;
• Observing peers in the process of performing work tasks;
• Seeing models of best practice finished products;
• Working out loud (e.g., explaining how you did/are doing something);
• Working on new projects/working with new clients;
• Working with supervisors on joint tasks (e.g., collaborating, working with others to explore solutions to real problems, deciding on actions);
• Working with peers on joint tasks (e.g., collaborating, working with others to explore solutions to real problems, deciding on actions);
• Problem solving with supervisors;
• Problem solving with peers;
• Experimenting with new ways of performing work tasks;
• Engaging in trial and error to perform work tasks;
• Replacing formal learning entirely with informal approaches (e.g., building a community of practice instead of an online course);
• Using informal approaches within a formal course or for pre- or post-training (e.g., having a live Twitter chat as part of the program);
• Getting tips on how to complete a task from supervisors;
• Getting tips on how to complete a task from peers;
• Receiving/providing performance feedback with supervisors (e.g., critiquing sessions on work);
• Getting/providing performance feedback with peers (e.g., critiquing sessions on work);
• Getting performance feedback from clients (e.g., critiquing sessions on work);
• Reviewing errors or unexpected occurrences with supervisors;
• Reviewing errors or unexpected occurrences with peers;
• Reviewing the development or history of task procedures or conditions;
• Identifying and discussing best practices used in other organizations;
• Discussing quality improvement suggestions with supervisors;
• Discussing quality improvement suggestions with peers;
• Reviewing significant trends, new laws, and other issues which may affect professional practice with supervisors/peers;
• Reflecting (e.g., individual/team, on actions/about how to improve performance, working out loud, blogging about learning experiences, sharing experiences on social network); and
• Reviewing completed projects (e.g., working out loud, sharing process and results).

Implications for the Current Study. For the current study, informal workplace learning will be addressed as the following list, which is a subset of the 55-item list above. The larger list was condensed down to 20 informal learning activities in an effort to streamline survey response time and consolidate content. Those activities culled from the 55-item list were judged to fall under other list items, thereby no facets of the more comprehensive list were lost. The electronic survey for the study, which will later be described in detail, will include the following informal workplace learning activities:

• Read professional magazines and reference materials;
• Use job aids, checklists, tools, videos, etc.;
• Use computerized information bases (e.g., EPSS, database);
• Search the Internet for job-relevant information;
• Use social media (e.g., engage with others, read blogs/feeds, blog as an individual/team);
• Share materials, resources, and knowledge;
• Establish/contribute to communities of practice;
• Attend/present at conferences;
• Participate in mentoring and/or coaching;
• Get performance expectations from supervisors/clients and/or set-personal performance expectations/objectives;
• Interact with supervisors/peers (e.g., chatting over the cubicle, water cooler encounters);
• Participate in work/job shadowing (e.g., shadow someone/being shadowed);
• Observe supervisors/peers in the process of performing work tasks;
• See models of best practice/finished products;
• Work with supervisors/peers (e.g., collaborate, problem solve, explore solutions to real problems, decide on actions);
• Engage in trial and error/experimenting;
• Get tips from supervisors/peers;
• Get/provide performance feedback with supervisors/peers/clients (e.g., critiquing sessions);
• Review (as an individual or team) significant trends, new regulations, and other issues which may affect professional practice; and
• Reflect as an individual or team (e.g., reflect on experiences/about how to improve performance, work out loud, blog/share experiences).

While informal learning occurs as diverse activities and interactions among professionals, there are several factors that influence its existence (or nonexistence) in the workplace. The next section will introduce those factors that support (and inhibit) informal workplace learning.

Supports of Informal Workplace Learning

Various factors support or inhibit informal learning in the workplace, many of which are mirror opposites of each other. Often, when a supportive factor is present, the tendency of employees to engage in certain forms of informal learning increases. Likewise, when that support factor is missing, or its mirror opposite instead is present, opportunities for informal learning are suppressed (Ellinger, 2005; Sambrook & Stewart, 2000). The following section will present the individual and environmental factors that support informal learning in the workplace.

**Individual Factors.** Characteristics specific to individuals can influence whether or not, to what extent, or which activities they engage in informal workplace learning. The impetus, purpose, method, degree, and expected outcome of engagement may differ due to a number of personal variables. For example, Choi and Jacobs (2011) investigated the personal characteristics of “motivation to learn, self-efficacy, and learning goal orientation” (p. 242), whereas Lohman (2009) addressed “initiative, self-efficacy, love of learning, interest in the profession, commitment to professional development, a nurturing personality, and an outgoing personality” (p. 45) as an influence on informal learning. Overall, age, educational background, gender, self-efficacy, and career and learning motivation emerged as personal attributes that influence informal learning, as discussed below.

**Age.** Several researchers have addressed age as a personal characteristic that influences engagement in informal workplace learning, but with varying conclusions. Some have reported that employees, regardless of age, engaged in similar amounts of informal learning (Livingstone,
However, younger employees have also indicated greater participation in informal workplace learning than older employees (Kremer, 2005; Stowe, 2012; Tikkanen, 2002), and vice versa (Berg & Chyung, 2008; Smith & Smith, 2008). One point of consistency involves the social aspect of informal learning activities: while older employees sought more individualistic informal activities, younger employees often chose social methods of learning from others (Berg & Chyung, 2008; Livingstone, 2001; van Rijn et al., 2013).

**Educational background.** Interestingly, discrepancy also surrounds the relationship between the highest level of education a professional has completed and engagement in informal learning. Smith and Smith (2008) found that employees who completed more education usually engaged in more informal learning within the workplace, whereas van Rijn et al. (2013) explained that a higher educational level correlated negatively with informal learning, specifically with regards to asking for feedback. Furthermore, Berg and Chyung (2008) reported that educational background did not affect professionals’ decisions to engage in informal workplace learning.

**Gender.** Although men and women frequently reported roughly equal engagement in informal learning (Berg and Chyung, 2008; Lai et al., 2011; Smith & Smith, 2008), Stowe (2012) found a slightly higher tendency for men to participate in informal workplace learning than women. As Lai et al. (2011) explained, this pattern may indicate that both men and women value informal workplace learning. Despite this uniformity, gender may dictate the types of informal learning activities in which professionals engage (Smith & Smith, 2008) or whether they enjoy the activities (Lai et al., 2011). More specifically, Smith and Smith (2008) found that among low-education adults in the United States, men tended to refer to books, manuals, A/V tapes, and television, as well as attend conventions and conferences, more than women. Alternatively, women were more likely to attend club or group meetings, such as a book, sports-related, health-related, and arts and crafts groups, for informal learning. Also, Lai et al. indicated that women may enjoy engagement in informal learning more so than men. Surprisingly, despite most researchers reporting the gender make-up of study participants, most do not discuss how gender relates to informal workplace learning.

**Self-efficacy.** The theory of self-efficacy involves individuals’ beliefs about their abilities to complete tasks and achieve certain results (Bandura, 1977; Driscoll, 2005). To this end, self-
efficacy influences the types of activities in which individuals decide to engage. For example, Choi and Jacobs (2011), using a scale by Bosscher and Smit (1998), found that self-efficacy positively influenced the engagement of South Korean banking managers in informal workplace learning. Similarly, Noe et al. (2013) referred to self-efficacy as “a person’s confidence in his or her capabilities to perform a task” (p. 329) and hypothesized that restaurant managers in the United States who demonstrated high levels of self-efficacy would participate in more informal learning events. Surprisingly, however, when the researchers measured self-efficacy using the scale developed by Judge, Locke, Durham, and Kluger (1998), they did not find this same relationship. Only when combined with other personal characteristics, such as zest, agreeableness, conscientiousness, and emotional stability, did self-efficacy encourage participation in informal learning activities. On a related note, Lohman (2003, 2005, 2009) repeatedly confirmed that professionals in various fields, such as teaching, human resources development, and information technology, tended to engage in more informal workplace learning when possessing heightened self-efficacy. In spite of this pattern matching that of Noe et al.’s findings, it should be noted that Lohman (2003) considered self-efficacy only as “teachers’ image of themselves as professional educators and subject matter experts” (p. 50).

**Career and learning motivation.** Scholars have addressed various facets of employee motivation that stimulate engagement in informal learning, but two primary forms include motivation to learn and interest in one’s profession. Motivation to learn is a personal characteristic that drives professionals to seek and acquire knowledge (Choi & Jacobs, 2011), and interest in one’s profession, while mostly apparent, also involves the desire to stay updated on current trends and issues. Although some researchers investigated these topics separately and/or concurrently, Berg and Chyung (2008) used the two phrases interchangeably and found it was the strongest predictor of informal workplace learning among learning and performance improvement professionals.

Overall, professionals possessing motivation towards their careers and learning tend to participate in informal workplace learning. Lohman (2003, 2005, 2009) examined the practices of employees working in multiple professions and repeatedly confirmed that interest in one’s occupation led to participation in informal workplace learning. Similarly, investment bankers and their in-house training managers reported that the bankers relied heavily, and preferred, learning via informal methods (Chivers, 2011). Additionally, the bankers who participated in
Chivers’s study demonstrated a strong interest in learning—suggesting at a connection between an interest in learning and engagement in informal workplace learning. Also, Corppetts (2010) interviewed 10 professionals with varying jobs, including a pastor, school superintendent, psychologist, and barber, and again found that all sought informal learning due to self-motivation and career drive. Finally, van Rijn et al. (2013) studied the personal characteristics of career motivation, described as the ambition to succeed professionally. The researchers stated that when teachers at a Dutch vocational school exhibited career motivation, they actively sought and engaged in informal workplace learning as a means to achieve professional goals. For the purposes of their study, van Rijn et al. investigated how career motivation relates to the specific informal learning activities of “keeping up-to-date, feedback asking from supervisors, and knowledge sharing” (p. 614).

As discussed in this section, the individual factors of age, educational background, gender, self-efficacy, and career and learning motivation encourage professionals to participate in informal learning to some degree. Despite these findings, conflicting study results exist and new attention should be devoted to these factors within the specified context of the workplace. Furthermore, self-efficacy and motivation to learn depend on support received from the organization (Eraut, 2004). Due to this connection, factors of the workplace environment that foster informal learning among employees will be addressed next.

**Environmental Factors.** In addition to individual factors, characteristics specific to an organization also support or discourage the presence of informal learning (Marsick, 2013). This section will address five environmental factors that surfaced as the most influential: access to coworkers, access to work tools and resources, time for learning/flexible schedule, management attitude, and internal culture. As with the personal attributes previously discussed, these factors surfaced as influential because they support informal leaning if present or hinder it if absent.

**Access to coworkers.** Scholars have found that opportunities for interacting informally with colleagues influence both the types of informal learning activities in which employees engage and to what extent those activities occur (Lohman, 2005; Mariani, Curcuruto, & Gaetani, 2013; Svensson et al., 2004; Wofford, 2011). Oftentimes, these beneficial opportunities can be created or encouraged through the physical layout of an office space. For example, providing space for individuals to gather may naturally lead to employees meeting and engaging in work-related discussions (Mariani et al., 2013). Additionally, organizing an open work area that allows
employees access to each other regularly, such as nearby cubicles, may result in greater rapport and more collaborative interaction among colleagues (Cross, 2003; Polach, 2001).

These recommendations for access to coworkers and spaces for learning come from various empirical studies. Regarding accessibility to peers, employees within diverse workplaces and settings benefitted from this organizational factor. For example, Lohman and Woolf (2001) interviewed 22 public school teachers about their self-initiated workplace learning, and the vast majority explained that having other teachers in classrooms nearby expedites communication and information sharing. Later, Lohman (2005) expanded this research and surveyed both public school teachers and HRD professionals regarding their informal workplace learning experiences. Similarly, respondents indicated that a lack of access to coworkers limited their engagement in informal learning. In addition to these survey research studies, Svensson et al. (2004) implemented a learning center in both an industrial and hospital setting and found that accessibility to peers was a vital feature for encouraging workplace learning among employees. Flight instructors also benefitted from access to colleagues, which often lead to valuable conversations and collaboration (Wofford, 2011). In a slightly different, but related vein, Mariani et al. (2013) focused on employee professional development of technology and, after surveying almost 500 Italian professionals in a variety of fields, advocated for offering space for learning. As a means of organizational support to employees, space within the workplace designated for gathering and meeting makes informal learning possible.

**Access to work tools and resources.** Work settings in which relevant tools and resources are available to employees also may generate opportunities for informal learning, specifically in two main instances. Firstly, when employees are learning specific new skills, access to any anticipated tools is important. For example, in studying the workplace learning of e-learning technology, Svensson et al. (2004) found that opportunities to use and practice new software facilitated employees’ learning and communication with each other. Likewise, Mariani et al. (2013) also advised that firms should urge employees to practice using technology and software together. By making technology, materials, or support accessible to employees, individuals can experiment and learn, whereas they otherwise would not have the opportunity to do so.

Secondly, for professionals engaging in daily work tasks, the availability of necessary tools and resources often enhances informal learning and job performance. As Ellinger (2005) indicated from a case study of employees within a manufacturing company, ready access to tools
and other supports, such as computer software, the Internet, telephones, and financial resources, enhanced both informal workplace learning and on-the-job performance. Similarly, Wofford (2011) identified parallel activities among flight instructors, in that access to the Internet, literature, and media resources encouraged informal learning. When employees have relevant work tools and resources at their disposal, their work and learning tasks can often integrate seamlessly and yield more productivity.

**Time for learning/flexible schedule.** Because working and learning are often intertwined, a workplace that denies employees time for learning, either officially or unofficially, may result in clandestine efforts (Twidale, 2005). However, when employees possess time for learning during their workday, or have control of a flexible schedule to accommodate learning, their engagement in informal learning will often increase (Dunn, 2009; Lohman, 2005; Mariani et al., 2013; Svensson et al., 2004; Wofford, 2011).

Such a finding stems from multiple studies, conducted in a variety of settings. Dunn (2009) surveyed 178 U.S. state government employees and reported that almost half believed a flexible schedule offered them opportunities to engage in informal learning (with less than a quarter indicating that an inflexible schedule hindered their informal workplace learning). Similarly, Svensson et al. (2004) found that professionals in industry appreciated the option of studying during work hours and possessing autonomy in dictating their work/learning schedule. Based on similar results after surveying employees in Italian firms, Mariani et al. (2013) advised managers should provide time for informal learning during the workday. In addition, the organizational setting of a flight school provided new flight instructors time for learning informally, despite time constraints from the semester system and demanding personal schedules (Wofford, 2011). Finally, both public school teachers and HRD professionals reported that a lack of time hindered their engagement in informal learning.

**Management attitude.** Despite some researchers indicating that managers often lack the necessary skills and knowledge to guide their own workplace learning, as well as that of the teams they supervise (Ellinger & Cseh, 2007), a management attitude that is open to learning is a strong promoter of informal workplace learning (Choi & Jacobs, 2011; Dunn, 2009). In a case study of the organizational factors that promote or hinder employees’ informal learning, Ellinger (2005) found a major theme was learning-committed leadership and management.
Deconstructing this overarching topic further, Ellinger outlined seven common actions of learning-committed managers, which include:

- Create informal learning opportunities,
- Serve as developers (coaches and mentors),
- Visibly support and make space for learning,
- Encourage risk taking,
- Instill the importance of sharing knowledge and developing others,
- Give positive feedback and recognition, and
- Serve as role models. (p. 401)

Additionally, Warhurst (2012) and Cunningham and Hillier (2013) found that managers, possessing varying academic degrees and working in organizations across several disciplines, demonstrated a shared mentality regarding the central roles of management. For example, the managers interviewed in both studies considered informal workplace learning as fundamental to both organizational and individual success. Warhurst described managers addressing an employee’s needs by tailoring that individual’s work and learning opportunities, meaning that good managers will support their employees by giving them specific jobs and tasks that will provide specific lessons and experiences. Similarly, the supervisors interviewed by Cunningham and Hillier utilized mentoring relationships and temporary job restructuring as common strategies to support employees. Lastly, 178 managers responded to a survey regarding informal workplace learning and indicated that a supervisor supportive of learning was the most conducive factor to engagement in informal learning (Dunn, 2009).

**Internal culture.** In addition to management attitude, the internal culture of an organization, comprised of the atmosphere, official policies, and available resources, also has a substantial sway over the informal learning that occurs in a workplace. Firstly, the atmosphere of a workplace may communicate that the culture values employee learning as a method of promoting organizational and individual development, thus fostering informal learning (Choi & Jacobs, 2011; Ellinger, 2005; Wofford, 2011; Zhao & Kemp, 2012). For example, Twidale (2005) noted that, in an office setting in which “help giving was part of the culture” (p. 517), five administrative assistants interacted with each other continually to complete work tasks. This work arrangement, a product of the company’s internal culture, presented the employees with opportunities for information sharing and mutual learning. Additionally, an internal culture...
unsupportive of learning discouraged the informal learning among HRD professionals (Lohman, 2005).

Secondly, the established policies of an organization also may influence informal workplace learning. Officially recognized programs, such as incentive systems, encourage informal employee professional development (Ellinger, 2005). However, Choi and Jacobs (2011) expressed concerns for the extent of HRD policies, in that employees may feel confined by extensive regulations and therefore refrain from engaging in informal learning. Despite the fact that HRD policies often align more with formal training and may discourage informal learning (Choi & Jacobs, 2011), such formal learning experiences may prompt subsequent informal learning to occur (Choi & Jacobs, 2011; Ellinger, 2005).

Thirdly, an organization’s internal culture can also shape employees’ informal learning by providing resources supportive of learning. Various scholars have offered examples of such working-learning incentives and resources, including technology, work tools, and job characteristics (Choi & Jacobs, 2011); tuition reimbursement, libraries of reference material, subscriptions to professional journals, video and computer-based courses (Marsick & Watkins, 2001; Watkins & Cervero, 2000); and workplace and workload variety, participation, coaching, organizational earning climate, functional level, and number of employees (van Woerkom, Nijhof, & Nieuwenhuis, 2002). Different forms of supportive resources will influence the types of informal learning activities employees pursue and, depending on the availability of the resources, to what extent.

Additionally, it is important to note that these characteristics often do not stand alone as persuasive entities in organizations. Instead, they commonly work in tandem with or occur from the presence of other factors. For example, when professionals possess a flexible schedule to accommodate more learning or have accessibility to interact with coworkers, they often do so because supportive managers or an organizational culture allow it. Also, these factors can merge together during working/learning events, such as employees collaborating and learning from each other within their workplace under the supportive approval of supervisors and internal culture, to yield tailored informal learning events—created by the employees.

**Implications for the Current Study.** Overall, the five environmental factors discussed in this section emerged as most influential to employees’ informal learning in the workplace, and will therefore be further investigated in this study. To this end, and including additional
environmental factors addressed earlier in the individual characteristics portion of the literature review, the following twelve environmental factors, resources, and supports will appear on the electronic survey form:

- Access to supervisors/peers (e.g., close proximity to others, open floor plan of workspace);
- Open space for congregating (e.g., lounge, lobby, common area);
- Technology (e.g., hardware, software, EPSS);
- Access to professional magazines/journals;
- Membership to professional organizations;
- Financial support to attend/present at conferences;
- Access to resources via the Internet;
- Community(ies) of practice (face-to-face or online);
- Mentorship/coaching programs;
- Time for learning (e.g., freedom to learn during the workday, control of time devoted to learning/working);
- Learning-committed managers (e.g., managers who support/reward learning); and
- Learning-committed internal culture (e.g., policies/programs support learning, resources/incentives encourage learning).

**Instructional Design and Performance Improvement**

The field of instructional design and performance improvement (ID/PI) encompasses two noteworthy branches, among several. The first, instructional design (ID), is defined by Smith and Ragan (2004) as “the systematic and reflective process of translating principles of learning and instruction into plans for instructional materials, activities, information resources, and evaluation” (p. 2). Through this process, practitioners envision effective (yielding desired performance results), efficient (cost effective), and elegant (creative and appealing) instructional products (Richey, Klein, & Tracey, 2011; Smith & Ragan, 2004). Often paired with ID is performance improvement (PI), a division of the field that involves analyzing the existing on-the-job performance of individuals with the intent of maximizing their potential (Reiser, 2001; Rothwell, Hohne, & King, 2007). This analysis addresses individuals’ current state of performance, and various models exist to assist PI technologists conduct a thorough evaluation yielding accurate information (Stolovitch, 2007).
Practitioners of ID/PI work in a variety of environments, including K–12, university, corporate, government, and military settings. Additionally, ID/PI professionals may hold job responsibilities such as designing, developing, and evaluating training programs and supporting clients’ workplace performance and professional development. Given that a major function of ID/PI practitioners is to ensure the optimal performance of employees, and also granted that the majority of learning in the workplace is informal in nature, a unique opportunity emerges—one in which ID/PI professionals may possess a great deal of influence. However, despite the exciting potential of this intersection, the connection between ID/PI practitioners and informal learning has not received much attention from researchers.

**Informal Learning in Instructional Design and Performance Improvement**

In fact, only two empirical studies have considered how ID/PI practitioners utilize informal learning (Berg & Chyung, 2008; Yanchar & Hawkley, 2014). First, Berg and Chyung (2008) focused on what factors encourage (or discourage) ID/PI professionals to engage in informal workplace learning. In total, 125 workplace learning and performance improvement practitioners, “who are likely working professionals in the fields of instructional and performance technology, organizational behavior management, organizational development, training, and e-learning” (p. 233), completed Berg and Chyung’s online survey. Although the researchers shared useful results pertaining specifically to ID/PI practitioners, they did not explain their rationale for selecting this population, nor mention the unique connection between their sample’s professional expertise and informal learning. Instead, two of the research questions for this study pertain to how factors of an organization and a workplace setting influence ID/PI professionals’ perceptions of informal learning.

More recently, Yanchar and Hawkley (2014) conducted in-depth interviews with six members of an instructional design team working in a university setting to support faculty. The researchers found that, through the nature of ID work, each member of the design team is constantly learning through work tasks. Furthermore, because the learning is grounded in work, this learning is informal and, therefore, the ID team members engage in informal learning continuously. One conclusion Yanchar and Hawkley proposed was that “design itself can be thought of as a specialized type of informal learning” (p. 271) that is not acknowledged within the corpus of informal learning and ID/PI literature.
Purpose of the Current Study

Overall, scholars have neglected the perspectives of ID/PI practitioners regarding informal workplace learning, which can be considered on two levels. First, the practitioner pertains to ID/PI practitioners facilitating informal learning within their organizations. Second, the organization refers to how ID/PI practitioners see their organization facilitating informal workplace learning among employees.

Regarding the practitioner, no research has been conducted that addresses how ID/PI practitioners support informal learning within their organizations to support learning and performance. For example, they may incorporate informal learning strategies within deliverables to meet their clients’ training and work performance needs. Additionally, considering the organization, many researchers have addressed the importance of organizational culture on the presence of informal workplace learning (Lohman, 2005; Marsick, 2013), but only Berg and Chyung (2008) have done so from the particular perspective of ID/PI practitioners. Furthermore, Yanchar and Hawkley (2014) explained that because ID contexts can vary drastically by scope, content area, and purpose, researchers should explore many different groups and scenarios. Finally, Berg and Chyung (2008) called for further attention to the individual level of informal workplace learning since so much research has been directed only at the organizational level.

Therefore, in order to fill these gaps and contribute to the literature of informal learning and ID/PI, the purpose of the current survey research study is to investigate the perspectives of ID/PI practitioners regarding informal workplace learning. This investigation will occur on two levels: the practitioner (how ID/PI practitioners facilitate informal learning within their organization) and the organization (how ID/PI practitioners see their organization facilitating informal workplace learning among employees). To do so, four research questions, described in detail in the next chapter, will guide the study. Also, Chapter 3 will present the design and methodology for the study.
CHAPTER 3

METHOD

The purpose of this study was to explore the perceptions of instructional design/performance improvement (ID/PI) practitioners regarding informal workplace learning. To do so, two levels of practitioners’ informal learning were addressed: the practitioner (ID/PI practitioners facilitating informal learning within their organizations) and the organization (how ID/PI practitioners see their organization facilitating informal workplace learning among employees). Four research questions, aligning with these two aspects of inquiry as described below, guided this study:

• The practitioner:
  - Research Question 1: What types of informal learning activities do ID/PI practitioners facilitate in their organization?
  - Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

• The organization:
  - Research Question 3: What environmental factors do organizations provide to facilitate informal learning?
  - Research Question 4: How do organizations facilitate informal learning among their employees?

Research Design

The research was a survey study, designed to gather information regarding the types of informal learning ID/PI practitioners facilitate within their organizations and see facilitated by their organizations. Because the intent of the study was to examine trends, characteristics, and beliefs of a group, a survey design was appropriate (Creswell, 2009). The two-part study began with an electronic survey, with follow-up interviews conducted with a sub-group of 20 participants via telephone. Both quantitative and qualitative data were collected through these two portions of the study.
Participants

Participants were 385 ID/PI practitioners, varying in gender, age, education level, years of professional experience, job roles, and place of employment. A total of 650 individuals responded to the survey, of which 265 did not complete the survey in full or were not current ID/PI practitioners, and were thus removed from the usable responses. Therefore, for the purposes of this research study, 385 ID/PI practitioners (143 men, 241 women, 1 unreported) responded to the online survey. Regarding years of ID/PI-related job experience, 34% (n=129) reported less than five years, 23% (n=89) had 6–10 years, and 43% (n=167) possessed more than 10 years. The majority (52%, n=201) currently worked in an educational institution, and the two most common job titles among respondents were manager (17%, n=67) and designer (17%, n=65). See Table 1 for additional details for the 385 survey respondents.

<table>
<thead>
<tr>
<th>Survey Respondent Characteristic</th>
<th>Characteristic Factor</th>
<th>Number of Respondents (n=385)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>143</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>241</td>
<td>63%</td>
</tr>
<tr>
<td></td>
<td>Unreported</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>Age</td>
<td>Younger than 20</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>20–29</td>
<td>33</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>30–39</td>
<td>115</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>40–49</td>
<td>105</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>50–59</td>
<td>87</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>60–69</td>
<td>40</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>70 and older</td>
<td>5</td>
<td>1%</td>
</tr>
<tr>
<td>Level of Education</td>
<td>Bachelors degree</td>
<td>24</td>
<td>6%</td>
</tr>
<tr>
<td>(in an ID/PI-related field)</td>
<td>Master’s degree</td>
<td>226</td>
<td>59%</td>
</tr>
<tr>
<td></td>
<td>Specialist degree</td>
<td>9</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
<td>95</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Professional Certificate</td>
<td>8</td>
<td>2%</td>
</tr>
</tbody>
</table>
Table 1 – continued

<table>
<thead>
<tr>
<th>Survey Respondent Characteristic</th>
<th>Characteristic Factor</th>
<th>Number of Respondents (n=385)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of Education</strong></td>
<td>Not Applicable</td>
<td>22</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Unreported</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>(in an ID/PI-related field)</td>
<td>Less than 5 years</td>
<td>129</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>6–10 years</td>
<td>89</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>More than 10 years</td>
<td>167</td>
<td>43%</td>
</tr>
<tr>
<td><strong>Years of Professional Experience</strong></td>
<td>Less than 5 years</td>
<td>129</td>
<td>34%</td>
</tr>
<tr>
<td>(in an ID/PI-related field)</td>
<td>6–10 years</td>
<td>89</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>More than 10 years</td>
<td>167</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Consultant</td>
<td>46</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Designer</td>
<td>65</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Developer</td>
<td>33</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Human Performance Improvement Specialist</td>
<td>16</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>67</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Primary Job Role</strong></td>
<td>Project Lead Designer</td>
<td>40</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Subject Matter Expert</td>
<td>19</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Trainer</td>
<td>25</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>74</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Type of Client</strong></td>
<td>Internal</td>
<td>219</td>
<td>57%</td>
</tr>
<tr>
<td></td>
<td>External</td>
<td>61</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Both</td>
<td>101</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Unreported</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Individual Practitioner</td>
<td>18</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>2–10</td>
<td>9</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>11–50</td>
<td>32</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>51–100</td>
<td>16</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>101–500</td>
<td>56</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Number of Employees in Organization Worldwide</strong></td>
<td>501–1,000</td>
<td>39</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>1,001–10,000</td>
<td>109</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>10,001–50,000</td>
<td>48</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>50,001–100,000</td>
<td>21</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>More than 100,000</td>
<td>24</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Did not know.</td>
<td>13</td>
<td>3%</td>
</tr>
</tbody>
</table>
The practitioners who participated in follow-up interviews varied by years of professional experience, job role, and type of organization. Purposive sampling was used to select 20 of the 95 volunteers (details of this process will be described later). See Tables 2 and 3 for more details of the 20 interviewees.

Table 2. Demographic information of each interviewee.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Years of Professional Experience</th>
<th>Primary Job Role</th>
<th>Type of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1–5 years</td>
<td>Developer</td>
<td>Transportation</td>
</tr>
<tr>
<td>2</td>
<td>1–5 years</td>
<td>Manager</td>
<td>Association/Non-profit</td>
</tr>
</tbody>
</table>
Table 2 – continued

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Years of Professional Experience</th>
<th>Primary Job Role</th>
<th>Type of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>6–10 years</td>
<td>Project Lead Designer</td>
<td>Instructional Design Firm</td>
</tr>
<tr>
<td>4</td>
<td>1–5 years</td>
<td>Manager</td>
<td>Educational Institution</td>
</tr>
<tr>
<td>5</td>
<td>10–20 years</td>
<td>Designer</td>
<td>Educational Institution</td>
</tr>
<tr>
<td>6</td>
<td>6–10 years</td>
<td>Manager</td>
<td>Retail</td>
</tr>
<tr>
<td>7</td>
<td>6–10 years</td>
<td>Manager</td>
<td>Government</td>
</tr>
<tr>
<td>8</td>
<td>More than 20 years</td>
<td>Project Lead Designer</td>
<td>Educational Institution</td>
</tr>
<tr>
<td>9</td>
<td>More than 20 years</td>
<td>Project Lead Designer</td>
<td>Government</td>
</tr>
<tr>
<td>10</td>
<td>1–5 years</td>
<td>Human Performance Improvement Specialist</td>
<td>Financial Services/Insurance</td>
</tr>
<tr>
<td>11</td>
<td>10–20 years</td>
<td>Manager</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>12</td>
<td>1–5 years</td>
<td>Designer</td>
<td>Educational Institution</td>
</tr>
<tr>
<td>13</td>
<td>6–10 years</td>
<td>Manager</td>
<td>Financial Services/Insurance</td>
</tr>
<tr>
<td>14</td>
<td>More than 20 years</td>
<td>Manager</td>
<td>Consulting</td>
</tr>
<tr>
<td>15</td>
<td>6–10 years</td>
<td>Designer</td>
<td>Educational Institution</td>
</tr>
<tr>
<td>16</td>
<td>More than 20 years</td>
<td>Manager</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>17</td>
<td>6–10 years</td>
<td>Manager</td>
<td>Educational Institution</td>
</tr>
<tr>
<td>18</td>
<td>1–5 years</td>
<td>Trainer</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>19</td>
<td>1–5 years</td>
<td>Human Performance Improvement Specialist</td>
<td>Transportation</td>
</tr>
<tr>
<td>20</td>
<td>6–10 years</td>
<td>Consultant</td>
<td>Educational Institution</td>
</tr>
</tbody>
</table>

Table 3. Breakdown of interviewee demographic information.

<table>
<thead>
<tr>
<th>Years of Professional Experience</th>
<th>Primary Job Role</th>
<th>Type of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–5 years</td>
<td>Consultant</td>
<td>1 Association/Non-profit</td>
</tr>
<tr>
<td>6–10 years</td>
<td>Designer</td>
<td>3 Consulting</td>
</tr>
<tr>
<td>10–20 years</td>
<td>Developer</td>
<td>1 Educational Institution</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>Human Performance Improvement Specialist</td>
<td>2 Financial Services/Insurance</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>9 Government</td>
</tr>
<tr>
<td></td>
<td>Project Lead Designer</td>
<td>3 Instructional Design Firm</td>
</tr>
</tbody>
</table>

33
Table 3 – continued

<table>
<thead>
<tr>
<th>Years of Professional Experience</th>
<th>Primary Job Role</th>
<th>Type of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trainer</td>
<td>Manufacturing</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Retail</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Telecommunications</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>2</td>
</tr>
</tbody>
</table>

**Instrumentation**

**Part 1: Survey Form**

An electronic survey built within the Qualtrics© online system served as the primary method of data collection for Part 1 of the two-round procedure. This survey form consisted of two sections: demographics and informal learning (Appendix A). A formative evaluation of the survey instrument (described later) was conducted. Two cover letters (Appendix B), one addressed to the leaders of the professional organizations and the other intended for the contacts of academic ID/PI programs, accompanied the participant study invitation and live survey link.

**Demographic Information.** The demographic portion of the survey addressed participant characteristics on the individual and organizational levels. Pertaining to the individual, six items included gender, age, level of education in an ID/PI-related field, years of professional experience in an ID/PI-related field, primary job function, and type of client. Two items, regarding the number of employees worldwide and the type of organization, comprised the organizational level. These eight items were derived from existing instruments by Marsick and Watkins (2003); Klein, Spector, Grabowski, and de la Teja (2004); Vadivelu and Klein (2011); and Moore and Klein (2015).

**Informal Learning.** The informal learning portion of the survey entailed a list of the 20 informal workplace learning activities referred to in the literature review as having been amassed from the work of Lohman (2005); Watkins and Cervero (2000); Noe, Tews, and Marand (2013); the eLearning Guild (2014); and Moore and Klein (2015), as well as the list of 12 environmental factors, resources, and supports that emerged from the literature review. These lists appeared in two matrices: the first for the *practitioner* level and the second for the *organizational* level.
In the first matrix, the 20 informal learning activities were listed down the left column and a stem sentence for the *practitioner* level appeared as the header for the answer column (see Figure 1). Similarly, in the second matrix, the 12 environmental factors were listed down the left column and a stem sentence for the *organizational* level appeared as the header for the answer column (see Figure 2). Reading down the lists of informal learning activities and environmental factors, respondents were asked to identify those elements they facilitate within their organization (first matrix; the *practitioner*) and see their organization facilitate among employees (second matrix; the *organization*). To streamline the answering process, thus encouraging a higher response rate, respondents needed only to select the corresponding box if they agreed with the statement. For example, in the first matrix, if ID/PI practitioners did not facilitate the reading of practitioner magazines and reference materials, they left the corresponding box under the stem “As an ID/PI practitioner, I facilitate . . .” blank. Three open-ended fields at the bottom of both matrices allowed respondents to enter additional informal learning activities and environmental factors, resources, and supports.

![Figure 1. Portion of the practitioner-level matrix item of the informal learning survey.](image1)

![Figure 2. Portion of the organizational-level matrix item of the informal learning survey.](image2)
Following the matrices were three open-ended questions. The first addressed the practitioner, or how practitioners facilitate informal learning within their organizations. Similarly, the second question pertained to the organization and sought information regarding how practitioners see their organizations facilitating informal learning among employees. A final item that solicited volunteers for follow-up interviews concluded the survey, providing blank fields for respondents to share their names and preferred contact information.

**Part 2: Interview Protocol**

The purpose of the follow-up interviews was to delve deeper into the two levels of the practitioner and the organization. Therefore, data collected via the online survey in Part 1 informed the protocol for the semi-structured interviews of Part 2 (Creswell, 2009). After reviewing the results of the survey matrices and coding the open-ended survey responses, key findings formed a structure for the script. For example, over 90% of survey respondents reported that they facilitate the *sharing of knowledge, materials, and resources* within their organization. Therefore, each interviewee was asked about their perspective regarding this informal learning activity. Reference to the key points of interest from the survey results allowed a direct connection between the data from the 385 survey responders and the 20 interviewee participants. When responding to the prompts of the interview script, interviewees described their organization’s physical workspace, their main tasks within their current positions, how they facilitate the types of informal learning they indicated on their survey form, and how they see their organization facilitate informal learning among employees. See Appendix C for the complete interview protocol and script.

**Procedures**

**Formative Evaluation of Instruments**

Prior to data collection, the online survey was shared with 10 ID/PI practitioners who either belonged to one of the professional organizations or possessed an academic degree in ID/PI. During 1-on-1 conversations (either face-to-face or over the phone), the practitioners were asked to access the electronic survey; describe their thoughts while they completed it; and provide detailed feedback regarding the instructions, informational text, and items. After each evaluation meeting, any necessary changes were made to the survey form, which allowed the subsequent evaluation meeting to consider the most recent modifications. Throughout the 10 sessions, no major edits were required, with most changes consisting of wording clarification.
(e.g., the statement “NOTE: NOT the informal learning activities YOU engage in” was added to the prompt of the first matrix for further instructions) and answer options added to incorporate a more diverse group of respondents (e.g., “consultants” was added to the list of answer options for the demographic item “What is your primary job function?” and “More than 20 years” was added as an answer option for the item “How many years of professional experience do you have in the instructional design/performance improvement field?”). The purpose of this formative evaluation was to determine and improve any weaknesses of the survey, and thus enter the data collection phase with a robust survey instrument.

**Data Collection**

Data collection occurred in two rounds, with Part 1 consisting of the electronic survey and Part 2 comprised of 1-on-1 interviews. Approval from the Institutional Review Board (IRB) of Florida State University was received on 22 April 2015 (Appendix D), prior to all data collection activities, and all participants were informed that their contributions to the study would be confidential and voluntary.

**Part 1: Survey Procedures.** Three approaches achieved contact with ID/PI practitioners: via (a) professional organizations with which they currently hold memberships, (b) their former ID/PI academic programs, and (c) ID/PI-related professional development groups on social media. First, the three professional organizations that were contacted include the International Society for Performance Improvement (ISPI), Association for Talent Development (ATD), and Association for Educational Communications and Technology (AECT). Second, the 212 ID/PI academic programs that are listed in the Educational Media and Technology Yearbook (Orey, Jones, & Branch, 2013) were also contacted. Communication with the gatekeepers involved sharing cover letters, one letter to leaders of professional organizations and the second letter designated for points of contact for academic ID/PI programs. The purpose of the letters, which were virtually identical, was to introduce the study and request assistance in sharing the survey invitation and link. Compliant administrators of the professional organizations dispersed the request and survey link to their groups’ members, and agreeable academic program contacts did the same with their alumni networks. Third, the Instructional Design & E-Learning Professionals’ Group on LinkedIn served as a platform to further publicize the invitation to participate.
The online survey link remained open for two-and-a-half months, from 13 July to 30 September 2015. After three weeks of data collection, only the contacts for non-responding professional organizations and academic programs received follow-up requests (Appendix E). Email correspondence and survey responses from each professional organization and academic program were recorded in an Excel document (Appendix F), thus avoiding inundation of those groups already participating. The survey invitation was not posted a second time to the social media groups. The goal of these recruitment efforts was a minimum of 200 survey responses, which was exceeded at the conclusion of the data collection period.

**Part 2: Interview Procedures.** After the two-and-a-half month data collection window for Part 1 closed, all data were downloaded from the Qualtrics© system in an Excel document and reviewed in preparation for Part 2’s 1-on-1 interviews. Of the 385 survey respondents, 95 individuals volunteered to participate in follow-up interviews, and their contact information was entered into a second Excel document to schedule appointments (Appendix G). Because the goal of the interviews was to delve deeper into the topic of informal workplace learning from the perspective of ID/PI practitioners, interviewees were selected strategically (this process is described below) to yield a diverse group that is as representative of the population as possible.

The survey responses of volunteers were first organized within an Excel spreadsheet by years of professional experience; the three groups included (a) less than 5 years, (b) 6–10 years, and (c) more than 10 years of professional experience. From these three groups, the volunteer respondents were then organized by type of organization, primary job role, and number of employees in the organization. The purpose of this categorization was to identify a group of 20 individuals who represented a range of professionals in the ID/PI field.

Once this in-depth review of volunteers’ demographic survey responses yielded 20 representative practitioners, individual emails were sent to schedule times and dates for the interviews. Follow-up contact was made after a week of no response, and all correspondence was recorded in the Excel document. This first round of 20 invitations resulted in 10 meetings being scheduled, and therefore these procedures (reviewing the volunteer list/demographic information, selecting additional practitioners strategically, and making contact to schedule interviews) were repeated until 20 meetings were scheduled and confirmed. See Table 4 for a breakdown of the interview invitation and confirmation process.
At the agreed upon day and time, interviewees received a phone call to initiate the 1-on-1 interviews. After listening to a brief description of the study’s purpose, how informal learning was being addressed in the study, and their rights as participants, they consented to contribute to the phone interview and be audio recorded. All interviews were recorded with Audacity® software (Audacity Team, 2012; Version 2.0.1) for subsequent transcription. Throughout the interviews, and usually after a lengthy explanation by an interviewee, the researcher repeated back to the participants a brief summary of what he/she was currently explaining. The purpose of these periodic member checks was to confirm the participants’ meaning and establish a mutual understanding of the topic at hand. Following the interviews, all audio recordings were transcribed in Microsoft Word.

Table 4. Breakdown of the interviewee selection, recruitment, and confirmation process.

<table>
<thead>
<tr>
<th>Interviewees’ Years of Professional Experience</th>
<th>Total Volunteers for Interviews</th>
<th>Interview Invitations Extended</th>
<th>Total Interviews Conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>21</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>6–10 years</td>
<td>28</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>46</td>
<td>14</td>
<td>6</td>
</tr>
</tbody>
</table>

**Data Analysis Methods**

The study collected both quantitative and qualitative data, so multiple analysis methods were necessary. The quantitative data from Part 1 pertaining to demographics were analyzed with descriptive statistics through Excel software, and frequencies of both individual (gender, age, level of education in an ID/PI-related field, years of professional experience in an ID/PI-related field, primary job function, and type of client) and organizational (number of employees in organization worldwide and the type of organization) characteristics appear in Table 1.

Additionally, the qualitative data, such as open-ended survey responses and recorded interviews, were transcribed and saved in a textual, electronic format for coding. Analysis procedures included basic qualitative analytical procedures, as described by Creswell (2009) and Corbin and Strauss (1998). More specifically, rounds of open coding and axial coding were
implemented. Open coding involves a researcher reading through data to identify and label elements of related phenomena that emerge from the data. The researcher can then progress with axial coding, which involves further organization of the recently identified open codes, the output of the open coding process, by identifying relationships among them (Corbin & Strauss, 1998).

The NVivo for Mac software (Version 11.1.1) facilitated this coding of the qualitative data. The program allowed for excerpts of data to be highlighted, labeled with open codes, and accessed by applied codes (e.g., all excerpts coded as “make oneself available” will appear for review when that open code is selected). The NVivo software also quantified the codes in that it displayed the total number of times a code was applied. Additionally, the codes were adjustable, which allowed for modifications in wording and organization throughout the iterative analysis.

Due to the timing of the two sequential data collection phases, the open-ended survey responses were analyzed first. The sets of responses to the two open-ended survey items (practitioner and organization) were each uploaded into NVivo and analyzed separately. The set of responses pertaining to the practitioner level were imported into the software program (a total of 259 responses), all individual responses were read once through in entirety with no coding, and then three rounds of coding ensued. During the first coding round, each response was read, with Research Question 2 in mind (“How do ID/PI practitioners facilitate informal learning in their organization?”), and when an answer to this question was identified, that portion of the textual response was highlighted and an open code was created (if one did not exist already). After the first round of coding, all open codes were evaluated for relevancy and redundancy, at which point codes were organized (e.g., “Via email” was moved under “Share knowledge”) or reworded (e.g., “Social media” was changed to “Engage on social media”). At this stage, some axial codes were created to form a structure within the coding scheme. In the second round of coding, the researcher possessed more familiarity with the overall data set, as well as the current coding scheme, which allowed all codes to be more appropriately applied to participant responses. A third round of coding allow the researcher to ensure all data were organized within the open and axial codes, as well as confirm the structure of the scheme. This process was then repeated for the organization set of open-ended survey responses (a total of 221 responses) and Research Question 4.
A colleague coded a portion of the open-ended survey responses to incorporate additional decision-making and insight in the coding process, ultimately minimizing bias from a solitary researcher. During an initial 1-on-1 meeting, the researcher introduced the (a) coding scheme developed for the practitioner level and (b) data set from open-ended survey responses to the coder. Time was provided for the coder to read through the coding scheme and become familiar with the codes. To train the new coder on the rationale behind the coding scheme, the researcher and coder read an open-ended survey response together, and time was provided for the coder to practice selecting the appropriate codes. After the coder had selected the appropriate codes, the researcher revealed her selected codes. Any discrepancies were discussed until consensus on the appropriate codes was established. The researcher and coder repeated this process with 13 open-ended survey responses, at which point 100% accuracy had been achieved for at least 5 attempts. This practice session served to familiarize the coder on how to apply the coding scheme to the survey data.

The coder then received a coding form (Appendix H), created by the researcher, that included 20 randomly selected open-ended survey responses and the complete coding scheme. At his convenience, and not in the presence of the researcher, the coder read through the 20 survey responses and applied the codes he determined appropriate. The completed form was returned to the researcher, who then compared the coder’s coding selections with her own. The percent agreement of this comparison was calculated at 80%; the researcher and coder independently selected and applied the same codes for 16 of the 20 survey responses. In discussing cross-checking and inter-coder agreement in qualitative research, Creswell (2009) recommended achieving a minimum of 80% consistency between coders.

At a second 1-on-1 meeting, the researcher and coder discussed the discrepancies between their coding of the remaining four survey responses. Specifically, they read the survey responses together, discussed the applied codes, and agreed on a final selection of codes for the four survey responses to achieve 100% consensus. It should be noted that the discrepancies of the four survey responses were minimal. For example, the researcher and coder would both apply the same two or three codes, and one individual would also apply an additional code. Therefore, the conversations focused on the discrepant code.

After all open-ended survey responses had been coded and a scheme developed and verified for the levels of practitioner and organization, the interview script was finalized, based
on the survey results, and interviews with 20 practitioners commenced. Following each interview, the recording was transcribed and the Word document uploaded into NVivo twice: once for the *practitioner* level and again for the *organization* level. Each interview transcript was analyzed twice, against both sets of codes (i.e., the *practitioner* and *organization* levels). This allowed for the interviews to yield insight pertaining to both levels of inquiry for Research Questions 2 and 4. See Appendices I and J for the complete coding schemes for the *practitioner* (Research Question 2) and *organization* (Research Question 4) levels.

**Reliability**

The concept of reliability within quantitative research pertains to how consistently a survey form measures a construct (Creswell, 2008). Unclear instructions or poorly worded items, especially for a self-report survey, may weaken an instrument’s reliability (Fink, 2002). In other words, two similar individuals, who hypothetically should answer in the same way, may respond to an item differently due to their varying interpretations of the item. Therefore, to strengthen the reliability of the quantitative portions of this study, mainly the developed survey, a formative evaluation was conducted, and all necessary changes completed, before data collection.

**Generalizability**

Synonymous with external validity, generalizability addresses the extent to which research findings can be attributed to the greater population under study (Creswell, 2008). A large, randomly selected sample should yield results that, statistically, could not occur by chance (Given, 2008). The three-part sampling procedure of the survey respondents was used to determine the generalizability of findings.

**Trustworthiness**

Lincoln and Guba (1985) stated that the trustworthiness of a qualitative research project relies on four factors, credibility, transferability, dependability, and confirmability, that parallel measures in quantitative methods. Within the context of qualitative research, credibility relates to internal validity, transferability relates to external validity and generalizability, dependability relates to reliability, and confirmability relates to objectivity (Shenton, 2004). To ensure the trustworthiness of the qualitative aspect of the research, the following methods were enacted to verify these components.

**Credibility.** Described as the accuracy in findings (Lincoln & Guba, 1985), credibility was supported through well-established research methods, member checking, and methods
triangulation (Creswell, 2008; Shenton, 2004). Only sound and recommended methods of research were implemented for the duration of this research undertaking. For example, and as mentioned previously, member checking occurred throughout the interviews by repeating a synopsis of a participant’s lengthy explanation or description. This served to ensure mutual understanding of the participant’s perspective. Additionally, methods triangulation involved comparing the quantitative and qualitative data to determine if both sources support or contradict each other (Creswell, 2008).

**Transferability.** Similar to generalizability, transferability is the degree that findings can apply to other contexts (Lincoln & Guba, 1985). To enhance the transferability of this study (i.e., other groups of professionals), thick description of the research methods, sampling, data collection, data analysis, and emergent results were provided (Shenton, 2004). Doing so should provide other researchers with enough information about the current study, such as its context, participants, and conditions, to determine how applicable the findings are to other cases.

**Dependability.** The qualitative counterpart to reliability, dependability involves the likelihood of replicating research results by conducting a study again (Shenton, 2004). Due to the nature of qualitative research, the conditions and findings of each study are unique—in this case, ID/PI practitioners were asked to complete an online survey and participate in 1-on-1 interviews about informal workplace learning. Therefore, to support the dependability of the study, thick description has been provided regarding elements of planning and implementation of the study components, as well as analysis of all collected data. In this way, future researchers will be aware of the details comprising the study in the event of replication.

**Confirmability.** To improve the confirmability in a research study is to limit the amount of bias, motivation, or interest, either from researchers or participants (Lincoln & Guba, 1985; Shenton, 2004). This provision was achieved in this study by triangulation, involvement of multiple coders (and calculation of inter-coder reliability), recognition of limitations, and well-documented research methods and procedures. In the current study, triangulation of data collection methods should have reduced bias in that combining the online survey with follow-up interviews yielded more robust information, rather than drawing overall conclusions from only one source. Similarly, inviting an additional researcher to cross-check codes for excerpts of open-ended data protected the study results from researcher bias (Creswell, 2009). Also, in acknowledging limitations of a study, researchers should openly identify potential weaknesses of
a study and avoid concealing unattractive aspects of their research (see Limitations sections for more details). Finally, by clearly describing and documenting the research methods and procedures to be implemented in this study, other researchers may examine the findings, thus alleviating reservations about the research.

Significance of the Research

The purpose of this research was to address a gap in the literature involving the perceptions of ID/PI practitioners regarding informal workplace learning within their organizations. More specifically, this study examined the types of informal learning activities that ID/PI practitioners facilitate within their organizations and see their organizations facilitate among employees. In doing so, this study should reveal important insights regarding current, and possibly future, trends in the ID/PI field. The next section, Results, will present these insights.
CHAPTER 4

RESULTS

This study explored the perceptions of instructional design/performance improvement (ID/PI) practitioners regarding informal workplace learning. Informal learning was organized into two levels: the practitioner (ID/PI practitioners facilitating informal learning within their organizations) and the organization (how ID/PI practitioners see their organization facilitating informal workplace learning among employees). Four research questions, aligning with the two aspects of inquiry and listed below, guided this study. The purpose of this chapter is to report the results for each research question.

The Practitioner

Research Question 1: What types of informal learning activities do ID/PI practitioners facilitate in their organization?

The online survey yielded data to answer Research Question 1. The informal learning section of the survey consisted of two matrices, the first of which listed 20 informal workplace learning activities. Respondents selected those informal learning activities that they facilitated within their organizations. Below are the results to Research Question 1.

Survey. Overall, 18 of the 20 informal learning activities were facilitated by more than 50% of respondents. See Table 5 for a full breakdown of survey respondents’ results. The two most common types of informal learning facilitated by respondents were share materials, resources, and knowledge (92%, n=353) and use job aids, checklists, tools, videos, etc. (88%, n=337). The two least common types of informal learning facilitated by practitioners were observe supervisors/peers in the process of performing work tasks (44%, n=169) and participate in work/job shadowing (32%, n=123).

Table 5. Research Question 1: Breakdown of survey responses.

<table>
<thead>
<tr>
<th>As an ID/PI practitioner, I facilitate the following informal learning activities:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share materials, resources, and knowledge</td>
<td>353</td>
<td>92%</td>
</tr>
<tr>
<td>Use job aids, checklists, tools, videos, etc.</td>
<td>337</td>
<td>88%</td>
</tr>
</tbody>
</table>
Table 5 – continued

<table>
<thead>
<tr>
<th>As an ID/PI practitioner, I facilitate the following informal learning activities:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interact with supervisors/peers (e.g., chatting over the cubicle, water cooler encounters)</td>
<td>263</td>
<td>68%</td>
</tr>
<tr>
<td>Get tips from supervisors/peers</td>
<td>263</td>
<td>68%</td>
</tr>
<tr>
<td>Search the Internet for job-relevant information</td>
<td>257</td>
<td>67%</td>
</tr>
<tr>
<td>Use computerized information bases (e.g., EPSS, database)</td>
<td>256</td>
<td>66%</td>
</tr>
<tr>
<td>Participate in mentoring and/or coaching</td>
<td>252</td>
<td>65%</td>
</tr>
<tr>
<td>Reflect as an individual or team (e.g., reflect on experiences/about how to improve performance, work out loud, blog/share experiences)</td>
<td>250</td>
<td>65%</td>
</tr>
<tr>
<td>Read professional magazines and reference materials</td>
<td>246</td>
<td>64%</td>
</tr>
<tr>
<td>Work with supervisors/peers (e.g., collaborate, problem solve, explore solutions to real problems, decide on actions)</td>
<td>242</td>
<td>63%</td>
</tr>
<tr>
<td>Attend/present at conferences</td>
<td>238</td>
<td>62%</td>
</tr>
<tr>
<td>See models of best practice/finished products</td>
<td>237</td>
<td>62%</td>
</tr>
<tr>
<td>Use social media (e.g., engage with others, read blogs/feeds, blog as an individual/team)</td>
<td>234</td>
<td>61%</td>
</tr>
<tr>
<td>Establish/contribute to communities of practice</td>
<td>226</td>
<td>59%</td>
</tr>
<tr>
<td>Get/provide performance feedback with supervisors/peers/clients (e.g., critiquing sessions)</td>
<td>222</td>
<td>58%</td>
</tr>
<tr>
<td>Engage in trial and error/experimenting</td>
<td>208</td>
<td>54%</td>
</tr>
<tr>
<td>Get performance expectations from supervisors/clients and/or set personal performance expectations/objectives</td>
<td>205</td>
<td>53%</td>
</tr>
<tr>
<td>Review (as an individual or team) significant trends, new regulations, and other issues which may affect professional practice</td>
<td>204</td>
<td>53%</td>
</tr>
<tr>
<td>Observe supervisors/peers in the process of performing work tasks</td>
<td>169</td>
<td>44%</td>
</tr>
<tr>
<td>Participate in work/job shadowing (e.g., shadow someone/being shadowed)</td>
<td>123</td>
<td>32%</td>
</tr>
</tbody>
</table>

*NOTE: The total number of survey respondents was 385.

Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

An open-ended item on the online survey, as well as semi-structured interviews, yielded data to answer Research Question 2. Below are the results from each data source.
Survey. Of the 385 survey respondents, 259 typed a response in the textbox to elaborate on how they, as practitioners, facilitate informal learning within their workplaces. See Appendix I for the full breakdown of survey respondents’ results. Respondents of the open-ended item indicated that the most common way they facilitated informal learning in the workplace is by sharing knowledge (33%, n=85). Respondents’ statements indicative of this finding included the following:

- “If I find a good book or website, I share it with my colleagues and our student workers.”
- “[I] include opportunities for sharing tips and best practices in all faculty development workshops, send emails to faculty with resources and links, create and distribute a quarterly online news magazine.”
- “I share information using Google Drive, Learning Management Systems, tutorial documents, PowerPoint presentations, online resources, and one-to-one instruction.”
- “Internally, I share ID/PI resources with weekly emails of internet articles, books available in Books 24x7, and through discussion with individual employees. The main goal is to make people aware of resources they can use to learn and close performance gaps. Externally, we include lists of references and websites within course materials. I also participate in several communities of practice within my target audience groups and promote ways for them to gain access to materials for informal learning. We publish videos to YouTube to be used for informal learning and are beginning a complete redesign of the training program that will adding performance support materials that may be used for informal learning.”
- “I share resources and ideas with various members of my team strategically so that as team members have time, they can access the resources and extend their knowledge. . . . My objective is to create a workplace environment for my team in which information is rich, learning is encouraged, and time is spent processing each other’s learning.”

Interviews. The 20 interviewees elaborated on the ways they facilitated informal learning within their organizations, and the transcribed interview data were coded by the same coding scheme that emerged from the open-ended survey data to allow comparison. See Appendix I for the full breakdown of interviewees’ results. Regarding the results presented below, only those themes that were supported by at least 50% of participants appear.
When asked to describe how they facilitated informal learning, 17 of the 20 interviewees stated that they share knowledge with others, 15 chat with others, 15 engage in everyday work tasks, 13 encourage informal learning, 13 create and curate materials, and 10 collaborate and brainstorm with others (Table 6).

Table 6. Research Question 2: Breakdown of interview responses.

<table>
<thead>
<tr>
<th>As an ID/PI practitioner, I engage in the following to facilitate informal learning:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share knowledge</td>
<td>17</td>
<td>85%</td>
</tr>
<tr>
<td>Chat with others</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Engage in work tasks</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Encourage informal learning</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>Create and curate materials</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>Collaborate and brainstorm with others</td>
<td>10</td>
<td>50%</td>
</tr>
</tbody>
</table>

*NOTE: The total number of interviewees was 20.

The statements below, all excerpts from the interviews, illustrate how these themes manifest in practitioners’ places of business and facilitate informal workplace learning.

**Share knowledge.** Interviewees described their experiences of sharing knowledge with others in terms of what they shared (e.g., literature and articles, resources and materials, information and ideas, best practices) and how they shared (e.g., via email, meetings, word of mouth, social media). For example, regarding a personal habit of sharing germane articles with a team of instructional designers, one practitioner stated:

I’m an avid reader of the instructional designer journals and . . . I come across a lot of interesting articles . . . . And so if there’s one that really stands out as something that’s really focused on what we’re currently working on, I pass that out with a short summary of the article, a short statement about how we could use this article. . . . I just sent out an article that talked about how to design courses with the community of inquiry framework, and so as we’re designing, we’re always talking about teaching presence and the article
gave a lot of different examples about how we can teach about teaching presence and all that within our design. I thought it would be very useful for my team members.

Additionally, interviewees explained that they utilized various forms of technology to share knowledge, which included email, instant messaging, social media, and shared websites and repositories. One instructional designer described her team’s practice of sharing with each other and said, “We sometimes will just email each other, or share it within the Whatsapp group, or the group on the corporate social media platform. Sometimes we share videos, articles, . . . interesting images.” Additionally, when asked about how information and materials are shared between individuals, a manager said of his corporate team’s practice of sharing with each other:

Well it’s a combination of things. But primarily for the distribution to the larger team, it’ll be through Instant Messenger or through email. Typically through email. Now, depending upon the topic of subject matter, I may end up copying someone or leave a hard copy on someone’s desk knowing they have an interest or expertise there. By and large, try to share with the larger group as much as we can and as consistently as we can. We also have a website to where we can go place interesting articles or other things to share with our community . . . . We use that quite a bit here. We’re using it as an informal repository.

*Chat with others.* During the interviews, 15 individuals mentioned chatting face-to-face as a means of facilitating informal learning. The interviewees described their roles within these exchanges as both the knowledge sharer and knowledge gainer, sometimes acting as both within the same interaction. An interviewee described his open communication with two other designers as:

The community we have between all of us, it’s just this one thing leads to the next thing which leads to the next thing which leads to the next thing. And by the time we’ve gone through five things, we’re not even talking about what we were talking about in the first place.

He explained that through their continuous conversations at work, he constantly learns from them and vice versa.

Overall, these interactions tended to be spontaneous in nature, rather than planned conversations, as exemplified by the interview comment:
Well I find some of the most interesting and useful things that I encounter incidentally or accidentally, you just happen to meet somebody by chance, and talk something over, and it just so happens that they’re dealing with an instructional issue that interests me, or they make a suggestion for a possible project that hadn’t occurred to me.

The settings of these exchanges described by interviewees varied, ranging from brief conversations en route to a communal printer to calling out a question to an office room of people to making small talk during a company social event. One instructional designer recalled:

There’s a lot of “drop by the desk and chat about, you know, I’m working on this, how do YOU do it?” Because they [team of instructional designers] all support different clients. And they all have different contractual needs, and so there’s a lot of casual “stop by” kind of conversations.

Regarding how these types of exchanges occur, as well as the benefits of such interactions, another interviewee stated:

And you know a lot of those conversations, a lot of the informal learning that occurs at our holiday party! Because we start talking to people who we don’t normally see, and then we find out something like “Oh yeah, I’ve really wanted to do this” and then someone across the table goes “Are you kidding me? I’m already doing that. I can give you everything I have.”

Also noteworthy is that many interviewees further stated that these impromptu exchanges were some of the most beneficial experiences for their informal learning. A supervisor within a K–12 district explained:

It was the travel time that was probably some of the most valuable conversation. We talked about some of the things that we wanted to see happen in our district that were innovative. . . . So again, either in meetings or the time transitioning to and from meetings almost are more valuable for conversation.

Similarly, an instructional designer in the U.S. military described his thoughts on the relationship between formal, structured learning and informal, unstructured learning:

More validation and learning occurs at the 10-minute coffee break after a 50-minute presentation. You listen to a guy’s presentation, then a 10-minute coffee break before you go back in the room; more learning occurs in that 10 minutes than ever did in that 50 minutes. Because they’re away from the presentation, even if it’s hands-on, even if it’s
student-generated material, even if it’s constructivist where they’re gonna do a project; when they get away from the structure, into an informal setting where they can talk freely with each other . . . ultimately they always go reaffirm or talk about it at the coffee or wherever the food is.

*Engage in work tasks.* Of the 20 interviewees, 15 individuals mentioned their engagement in everyday work tasks led to informal learning events involving themselves and others. An instructional designer who supports high school instructors explained how he and the instructors learn from each other during work meetings:

Our instructor will come and sit down across the table from us and we start talking and usually it ends up with me flipping my screen around and looking at their grade book or looking at their Moodle page and us looking at some examples of “Hey this is what you could do.” So to me, everything we do is informal.

Another interviewee, responsible for the performance and accreditation of medical professionals, discussed her efforts in communicating new regulations and requirements to her doctors, surgeons, and anesthesiologists. To ensure her learners understand all recent changes and updates to protocols, she holds regular webinars and distributes newsletters. Regarding this practice of her everyday work tasks, she said:

And I’m learning about my own process, because based on the problems that come up, I’m learning, “Oh I must not have done that clearly enough; I’m gonna need to redefine that some way.” So I think everyone is constantly learning.

*Encourage informal learning.* Thirteen individuals commented in interviews that they facilitate informal learning within their workplaces by encouraging it, usually via a direct verbal statement. Also, interviewees described what types of informal learning activities they encouraged. For example, one designer discussed his childhood pastime of taking apart car engines to learn how they work, which influenced his learning/teaching philosophy and current practice of encouragement:

I’m centered on technology; I encourage people to not be afraid to click around. Get in and see what’s happening. . . . A lot of people are afraid of technology, afraid “I’m gonna break something.” . . . So we really encourage people to get in and try something. Just get in and click around, because you’ll learn a lot more from that than you will from us.
Most interviewees discussed how they point others to available resources, such as shared repositories, libraries, websites, or webinars. For example, a team lead recalled supporting a novice instructional designer through his first official assignment with their firm by directing him to recorded descriptions of their processes and procedures:

I was able to point him to some internal information about our creative team and procedures. . . . and he was able to read through our performance support materials about how we submit video designs for filming. And the project turned out very successfully because he was able to proactively go out, speak with some folks, gather the information, read through the forms, and understand what his objective and his role was, so when he then worked the design, it meshed in very well and was effectively filmed.

Throughout the interviews, a common idea expressed was alerting others to available resources as a form of encouragement to engage in informal learning. Interviewees explained that they encouraged peers to attend upcoming professional development events by publicizing the details or making sure others knew about useful websites and links. This practice is exemplified in the comment from an interviewee who describes the various levels of communication of available resources, including the project management team, clients, her direct coachees/mentees, and audiences of her conference calls:

So as a manager, we make sure it’s available . . . and I personally then share and remind them all of the places that I am aware of where they can access any of those materials or videos or whatever so that we’re making sure that we’re socializing that and making that public, so that we can raise everyone’s awareness of what’s available to them.

A performance improvement specialist whose role is mainly content curation warned that compiling, organizing, and sharing information is not enough to ensure success:

We have to take a practical stance and not simply just be aware that informal learning is occurring and just throw some resources for it and let it go. We have to be actively engaged in the process and helping people use them more effectively, both for the relevance and more for the effectiveness of the content that we’re sharing with them.

**Create and curate materials.** Out of the 20 interviews conducted, 13 individuals claimed they created and curated materials to support their learners’ and teams’ informal learning. The materials and learning objects discussed included job aids, reference information, libraries, and archived webinars. A common goal for these development and curation efforts was to provide
professionals with just-in-time information, often with the materials being stored in an online repository (either internal or external to a company) where professionals can quickly access specific information and continue in their work tasks.

For example, one interviewee described an extensive Performance Support Navigator Portal hosted and maintained by his learning and development group. The purpose of this online portal is to allow internal clients to “search for and get resources related to any topic that they’re interested in.” The interviewee’s team populates the portal with performance support resources they create in-house, including job aids, short videos, and slide decks and workbooks from previous training sessions. She further explained that the theory behind client use of portal is that “it’s all self-generated. You’re [learners] going there to find it yourself, and pull it down, so nobody’s requiring you to go there.”

Additionally, an instructional support staff member at a university facilitated informal learning among faculty by taking it upon himself to create and provide professional development materials. Of his efforts he stated:

I’ve developed a website for our faculty that has about 35 articles that I’ve wrote over a two-year period about education research, best practices, on certain issues that instructors typically face, so I often refer them there . . . or they’ll find it and they’ll contact me if something is on their mind.

He explained that, as an ID/PI practitioner, his intention was “deliberately to provide sort of evidence-based research findings about best teaching practices and learning in different contexts.” Their group does not provide structured training sessions on those types of topics, so his archive of articles often “leads to informal emails or in-person conversations.”

**Collaborate and brainstorm with others.** Interviewees also indicated that they facilitated informal learning through collaboration and brainstorming sessions. Working alongside others to solve problems was a common stimulus for informal learning. For example, many interviewees mentioned that they and their colleagues learned new tips or strategies from hearing others’ suggestions and seeing others’ solutions. While discussing this type of interaction, an interviewee stated, “During our meetings we collaborate and share best practices and try to teach each other.” Another designer, who was skilled in using Google docs, explained the advantage of working with a colleague who was more knowledgeable in Microsoft Excel:
But together, especially using Google docs, working in the same document at one time, I would see the equation that she was writing to get things to do the things we wanted them to do . . . we absolutely learned a lot from one another.

Additionally, brainstorming also led to shared informal learning. The manager of a team of designers said, “We all do that, kind of go back and forth and pick each other’s brains when something doesn’t make sense or if it looks like it can be done better,” and an instructional designer commented, “I brainstorm ideas with other IDs if something is challenging or I need a different perspective and vice versa.”

**The Organization**

**Research Question 3: What environmental factors do organizations provide to facilitate informal learning?**

The online survey yielded data to answer Research Question 3. The informal learning section of the survey consisted of two matrices, the second of which listed 12 environmental factors. Respondents selected those environmental factors that they see offered by their organizations, thus facilitating informal learning within their workplaces. Below are the results to Research Question 3.

**Survey.** Overall, 10 of the 12 environmental factors were provided by the organizations of more than 50% of respondents. See Table 7 for a full breakdown of survey respondents’ results. The two most common environmental factors provided by organizations included *access to resources via the Internet* (87%, n=335) and *technology* (82%, n=315). The two least common environmental factors identified by respondents were *learning-committed managers* (47%, n=182) and *mentorship/coaching programs* (46%, n=178).

**Table 7. Research Question 3: Breakdown of survey responses.**

<table>
<thead>
<tr>
<th>To facilitate informal learning, my organization provides:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to resources via the Internet</td>
<td>335</td>
<td>87%</td>
</tr>
<tr>
<td>Technology (e.g., hardware, software, EPSS)</td>
<td>315</td>
<td>82%</td>
</tr>
<tr>
<td>Access to supervisors/peers (e.g., close proximity to others, open floor plan of workspace)</td>
<td>255</td>
<td>66%</td>
</tr>
<tr>
<td>Funding (to cover fees for conferences, webinars, etc.)</td>
<td>254</td>
<td>66%</td>
</tr>
<tr>
<td>Open space for congregating (e.g., lounge, lobby, common area)</td>
<td>244</td>
<td>63%</td>
</tr>
</tbody>
</table>
Table 7 – continued

<table>
<thead>
<tr>
<th>To facilitate informal learning, my organization provides:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communities of practice (face-to-face or online)</td>
<td>230</td>
<td>60%</td>
</tr>
<tr>
<td>Time for learning (e.g., freedom to learn during the workday, control of time devoted to learning/working)</td>
<td>225</td>
<td>59%</td>
</tr>
<tr>
<td>Access to professional magazines/journals</td>
<td>218</td>
<td>57%</td>
</tr>
<tr>
<td>Learning-committed internal culture (e.g., policies/programs support learning, resources/incentives encourage learning)</td>
<td>200</td>
<td>52%</td>
</tr>
<tr>
<td>Membership to professional organizations</td>
<td>196</td>
<td>51%</td>
</tr>
<tr>
<td>Learning-committed managers (e.g., managers who support/reward learning)</td>
<td>182</td>
<td>47%</td>
</tr>
<tr>
<td>Mentorship/coaching programs</td>
<td>178</td>
<td>46%</td>
</tr>
</tbody>
</table>

*NOTE: The total number of survey respondents was 385.

Research Question 4: How do organizations facilitate informal learning among their employees?

Both an open-ended item on the online survey and the semi-structured interviews captured data related to Research Question 4. Below are the results from each data source. Regarding the results presented below, and coinciding with the analysis for Research Question 2, only those themes supported by at least 50% of participants appear.

Survey. Of the 385 survey respondents, 221 typed a response in the textbox to elaborate on how they see their organizations facilitate informal learning. See Appendix J for the full breakdown of survey respondents’ results. Respondents revealed the two most common ways their organizations facilitated informal learning was through the internal culture (70%, n=155) and by providing resources and tools (59%, n=130). These two findings are discussed in more detail below.

Internal culture. Survey respondents typed descriptions of organizational cultures, often comprised of supportive management and shared values of learning and growth that are supportive of informal learning. The following are examples of open-ended statements that support this finding.

- “We facilitate informal learning by helping our managers better assist their employees in creating personalized development goals that will support their performance objectives.”
We provide various tools and systems. We allow opportunity for collaboration and informal learning. We encourage and support books clubs and communities of practice. We provide financial support for professional memberships and conferences. We provide innovation awards.”

- “Our organization strongly supports informal learning. Our CEO provides talking points on recent books that he has read and encourages those of us that are interested to borrow the book. I have been able to expense books that I read leisurely to support my own professional learning and we are provided with hours each week to spend on professional learning during the work day.”

- “Magazines to further informal learning are scattered around the institution. The administration emphasizes the importance of being current on their subject matter.”

- “Open floor plan, group chat channels, conference funding, book clubs, access to professional journals, and a culture of learning and growth.”

- “Many of our administrators are engaged in their own informal learning and this comes through in the culture they are building in our organization. They have decided to create a culture of learning within the organization, in order to then have teachers create the same type of culture in their classrooms. They model informal learning for our teachers.”

- “Our staff controls their own scheduling so are free to participate in learning activities as they want or require. Our main centre has areas for congregating and discussions. Our staff has access to (virtually) any type of technology they might require to use or learn about. . . . As above, we have a formal and informal mentor program in place. As the program manager, I am fully committed to meeting the learning needs of both my professional and support staff. My perspective is that our program is, in essence, a learning program—we learn continuously ourselves and we offer as many learning opportunities as possible to external teams throughout the year.”

**Resources and tools.** The open-ended responses also showed that organizations provide employees with resources and tools, such as funding, technology, literature, online collaborative forums, and time for professional development, that allow informal learning to occur. Statements indicative of this finding appear below.

- “The organization pays for membership to the local chapter of the Association for Talent Development, provides a small annual tuition reimbursement, and will sometimes pay for
certain employees to attend conferences (though it is generally contingent upon that person presenting a topic at the conference). . . . Internet access is unrestricted and is used primarily for research necessary to write content for our clients.”

- “Subscribes to resources like Lynda.com, Harvard Business Review, etc. and makes broadly available to employees at no cost, supports communities of practice and other informal knowledge sharing on various internal forums (Slack, Yammer, proprietary forums, etc.)”

- “A budget is set for each person to pursue professional development . . . . There is easy access to journals, publications, conference notes, etc. through organisational [sic] subscriptions and memberships.”

- “The organisation [sic] I am working uses conference allowance, magazines from professional bodies, communities of practice, etc. to facilitate informal learning.”

- “Pretty much everything checked above - they give us time, space, and resources to explore things we believe are relevant to our personal improvement (related to the job) and to the company’s improvement.”

- “Access to working technology free of restrictions regarding use/access. For example our Internet search capabilities are not blocked, we have service consultants in staff to keep tools working and up to date, and our leadership provides new/updated software and other tools regularly as needed.”

**Interviews.** During the 1-on-1 interviews, the 20 ID/PI practitioners furthered explained how they see their organizations facilitate informal learning within their workplaces (Table 8). The transcribed interview data were coded by the same coding scheme that emerged from the open-ended survey data to allow comparison. See Appendix J for the full breakdown of interviewees’ results.

<table>
<thead>
<tr>
<th>To facilitate informal learning, my organization provides:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal culture</td>
<td>20</td>
<td>100%</td>
</tr>
<tr>
<td>- Supports sharing and asking questions</td>
<td>18</td>
<td>90%</td>
</tr>
<tr>
<td>- Supports chatting, visiting, and communicating with others</td>
<td>16</td>
<td>80%</td>
</tr>
</tbody>
</table>

Table 8. Research Question 4: Breakdown of interview responses.
Table 8 – continued

<table>
<thead>
<tr>
<th>To facilitate informal learning, my organization provides:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supports (structured) opportunities for learning and professional development</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>• Supports learning and growth</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>• Supports (unstructured) opportunities for learning and professional development (brown bags, book clubs, etc.)</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>• Has a learning-positive management attitude</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>Resources and tools</td>
<td>20</td>
<td>100%</td>
</tr>
<tr>
<td>• Email and instant messaging</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>• Funding</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>• Online space, forum, or social media</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>• Internet or Intranet</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>Physical workspace</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>• Open, common, and shared space</td>
<td>12</td>
<td>60%</td>
</tr>
</tbody>
</table>

*NOTE: The total number of interviewees was 20.

The statements below, all excerpts from the interviews, illustrate how these themes manifested in practitioners’ places of business and facilitated informal workplace learning.

**Internal culture.** All 20 interviewees identified their organizations’ internal cultures as a supportive force for informal learning. For example, one individual mentioned that the “day-to-day culture” of her corporate office was a major impetus for informal learning. Another interview yielded the following statement about a university setting: “We’re very open in this department to anything . . . We’re very open to informal learning. Because everything can’t be in a conference room.” When prompted during the interviews, interviewees explored their overarching statements about supportive organizational cultures. The subsequent descriptions yielded specific characteristics of internal organizational cultures that facilitated informal learning. The seven most common traits of an organization’s internal culture that facilitated informal learning are listed in Table 8 above and detailed descriptions of these characteristics appear below.

**Supports sharing and asking questions.** Of the 20 interviewees, 18 claimed their workplace’s internal culture encouraged employees to share information and ask questions of others, often utilizing a technology to do so. The interactions described during interviews were
often unplanned and occurred mid-task. Some organizations acknowledged the value of this type of informal learning and were actively working towards a more open and sharing culture among instructional design teams, as seen in the comment:

We found there were so many good things going on that we weren’t sharing like we’d like, and we want a lot of people to understand the good things going on so that they may be able to leverage it in their solution development.

Other groups already exercised a strategy of sharing, as an instructional designer explained of her team’s practice of sharing materials via electronic means: “We sometimes will just email each other, or share it within the Whatsapp group, or the group on the corporate social media platform. Sometimes we share videos, articles; there have been interesting images.” An instructional designer also personally assumed the role of knowledge sharer, stating, “I try to help people whenever someone asks me for help, like with IT stuff and with actual ISD stuff.” In addition to sharing with team members, another instructional designer recalled sharing information with her clients:

I did email faculty some pertinent links. And it wasn’t always technology-related, sometimes it was pedagogy or some new learning technique or hybrid courses if they were interested in that. . . . I just had people in mind, and if I came across an article I thought they might be interested in, I just forwarded it on.

Supports chatting and visiting with others. Sixteen interviewees’ organizations had internal cultures that encouraged employees to chat and visit with each other face-to-face, thus prompting informal learning to occur. These types of interactions were based in social engagement and often occurred as individuals were seated at a workstation or walking through the workplace (e.g., to and from a printer or coffee room). For example, one senior instructional designer described her team’s habit of chatting while working at their desks as “. . . we all kind of do talk about it [a current project] and see the benefits of this kind of more social, informal learning space.” Another designer and her group consciously created opportunities to chat with the faculty members who they supported within their university: “And so a lot of us do keep our doors open at all times just so we can have those conversations when people are filtering through the hallways and stuff like that.”

Supports structured opportunities for learning and professional development. Some organizations facilitated informal learning through structured opportunities for learning and
professional development. Sixteen interviewees identified this practice within their organizations, in which a structured learning event was used to stimulate subsequent informal learning. For example, one senior instructional designer described how her team, while implementing formal training sessions, encouraged learners to seek and share information via the firm’s internal network: “Learner-wise, we facilitate it [informal learning] by trying to leverage the social networking site and bring it into the classroom, and advertise it in the classroom, that people can go on there and share resources.” Similarly, a practitioner who focuses on content curation explained that he identifies appropriate resources to include in self-directed learning modules and facilitator-led workshops, with an overall goal of positioning learners to continue engaging in professional development and sharing new knowledge after completing the training. To achieve this, he communicates to his learners via the delivered content the additional ways to utilize the materials. He explained:

So we want to take full advantage of the content and what’s required, and model what you can do with the content. Is there something that they can take after you’re done and continue to do that with their teams potentially going forward.

*Supports learning and growth.* The organizational characteristic of support for learning and growth arose in interviews with 15 of the 20 interviewees. These individuals stated that their organizations’ internal cultures positively viewed employees learning and growing in their professional station. In most cases, this cultural support came from organizations’ initiatives to promote learning and development of staff. While discussing the culture of her firm, a manager of a design team described the overarching effort of her company to support employee learning and development:

The first thing is, as a firm, we have developed, or are working on the concept of developing, a learning ecosystem. You know, we have all kinds of things, both formal and informal, available to our staff.

Similarly, another designer described support for learning and growth that spanned her institution as a whole, as well as a strategy to implement the mission:

I believe it’s through the entire university . . . We’re creating a faculty development website, where we’re gonna have a lot of tools on there for faculty to become better instructors. So our Dean definitely supports education, on every level.
In workplace environments where learning and growth were supported, usually by cognizant efforts of the organization, informal learning was more prevalent. This again is evident in a comment about a company’s lunch-and-learn sessions:

“It’s not mandatory; it’s simply by choice. But they are pretty well attended. . . . Our company is probably like somewhere between 300 and 400 people, but for a lunchtime activity, I’d say there’s a good 40, 50 people there.

Supports unstructured opportunities for learning and professional development. Thirteen individuals described their organization facilitating informal learning through support of unstructured opportunities for learning and professional development. This organizational characteristic involved events such as journal clubs, lunch-and-learn sessions, online collaboration groups, or coffee social hours that generated informal learning and were not mandatory. An educational technologist who supports university faculty members explained that his workgroup:

has a monthly sort of informal talk about teaching, so there’s no agenda, no pre-meeting, no presentation. It’s for people who want to talk about teaching and learning, any topic related to teaching and learning; they just show up. Someone starts off with a topic and people contribute their ideas and reflections. So it’s sort of like a formal way to encourage informal learning.

During these extracurricular meetings, attendees share and gain knowledge among each other, which sometimes leads to conversations continuing via email or subsequent, purposeful meetings.

These types of unstructured events can also occur virtually, as was explained by an instructional designer recalling her institution’s effort to promote learning events via social media. The organization leaders of her institution established a Twitter journal club, where interested individuals read an article and joined a moderator and the author of the selected article in a Twitter chat group. She described the club meetings as “a discussion back and forth, for one to two hours, about the article and what that could mean.”

Has a learning-positive management attitude. Of the 20 interviewees, 12 referred to a learning-positive management attitude as a facilitating factor of informal workplace learning. These descriptions pertained to either (a) their experiences with their managers who supported learning or (b) their roles as managers in supporting the learning of subordinates.
Interviewees reported that they were more likely to engage in informal learning when their managers supported professional development. One instructional designer explained that she recently took on extra, challenging projects and volunteered for a national committee in order to strengthen her professional skills, efforts of informal learning that were greatly encouraged by her direct supervisor. Of this working relationship she said:

I’m so lucky that I have such a great supervisor and an environment to work in that really encourages those professional activities, and I talk to her all the time . . . . So it’s just a really great environment to develop myself professionally, and having the support of my supervisor.

In addition to supporting employees as individuals, learning-positive managers can also influence how a team interacts while working on projects. For example, a designer explained how management’s commitment to learning shaped the way his team worked together and helped each other:

My immediate supervisor and her supervisor value this sort of thing [informal workplace learning]. . . . So I think it’s part of a deliberate effort by the management of our unit . . . . People are open if somebody has something serious they want to talk about with somebody else. Get input, share ideas, gather opinions.

Some interviewees held leadership positions within their organizations and spoke about the learning-positive management attitude from a personal perspective. Many of these managers considered their role involved ensuring the professional success of their subordinates. This mindset is seen in comments from two interviewees: “As a manager, you try to create opportunities for people’s interests to grow and flourish” and “I have two direct reports at the moment, and it’s my job to facilitate their growth as instructional designers.” In order to provide this professional support, managers often relied on informal learning strategies. For example, one manager of a design team stated:

I kind of have to do it in a lot of the informal stuff that we do. . . . . I ask people on an individual basis what they’re interested in, what their expertise are in, and then try to create opportunities for their growth there, and to do a lot of research if they don’t know if they’re interested in something. And we get together as a team to share knowledge and to cross train and learn/share our learning with other members of our team.
In this example, the manager facilitates informal learning (e.g., chatting, asking questions, exploration, searching for information) among her team in order to develop their professional skills and knowledge.

Another manager, who engaged in informal learning activities to support her staff, described how she helped her team learn to identify solutions on their own by prompting and coaching them. Of her process, she said:

So I’ll ask questions as opposed to just saying “here’s where it is.” I’ll say things like, “Well, if we need to get X, Y, and Z finished, where do you think you might need to go or what kinds of things do you might need to research or find?” and see if they can tell me. . . . Those kinds of things. We’re doing that kind of coaching, informal, “teach don’t tell” all the time.

**Resources and tools.** All 20 interviewees confirmed that their organizations provided resources and tools that facilitated informal learning. The most common of these, which will be addressed in detail below, were:

- Email and instant messaging;
- Funding;
- Online space, forum, or social media; and
- Internet or Intranet.

**Email and instant messaging.** Sixteen of the 20 interviewees mentioned a company-affiliated email or instant messenger that enabled informal learning to occur. Most of these exchanges involved information sharing, such as sharing literature and asking questions. For example, concluding a discussion about online articles his team found useful, the manager of a design team explained how they shared the materials: “Primarily for the distribution to the larger team, it’ll be through instant messenger or through email. Typically through email.” Similarly, a novice learning technologies analyst relied on instant messenger to communicate with his mentor. Regarding in what capacity and how frequently he used instant messenger, he said:

So if I had a question offhand, I’d be like “Hey, what about this?” I think she enjoys being my mentor, but I’m sure there are times when she wishes I don’t have the direct IM line to her computer!

Overall, both company-provided email and instant messenger allowed ID/PI practitioners to share and learn efficiently while working.
Funding. The organizations of 12 interviewees offered financial funds for employee learning and development, and the most common outlets for these funds were tuition reimbursement and conference attendance. Interviewees often explained that their organizations anticipated these additional learning opportunities would lead to more informal learning within the organization. For example, when explaining how the professional development budget and policy worked within his large corporation, a manager said:

The attendance of professional conferences and webinars and workshops are on a case-by-case basis. But what you have to do is make a business case as to the value it will provide you and how you can leverage that within the business . . . . If you go to a conference, you are expected to come back and provide an overview. And what is the best practices identified or lessons learned, and more importantly, how are you going to apply what you learned back on the job and, if you’ve already done that, what outcomes or benefits have you seen as a result of applying this new knowledge.

In this example, which was echoed by other interviewees, the organization had instituted a policy that supported employees’ professional development, as well as attempted to maximize that investment. By requiring funding recipients to share any gained knowledge and experiences throughout the organization, more employees may potentially benefit from the devoted funds.

Online space, forum, or social media. Twelve interviewees stated that their organizations hosted space online where employees could communicate, such as a virtual discussion board or social media platform. Such online forums allowed practitioners to engage in informal learning activities such as posting questions, eliciting ideas, and sharing resources. An instructional designer lauded her firm’s effort in this area by say, “And then we also have a social media platform that is internal to the firm, so they’re able to engage with others. They can start conversation threads around a piece of knowledge that they’re seeking or a question that they have.” Another instructional designer explained that her company also maintained a similar social media set-up, and further described how her design team leverages it within their support of learning and performance:

We also have an internal social networking site, where we have used that to promote learning in the field, like on-the-job-learning, and that’s usually on topics where they might be interested in getting things that aren’t covered in a formal instructor-led, but again—not required! One of the topics that comes to mind is Excel. That’s something
that a lot of people need information on: How do you do all kinds of different things in Excel, but not something that we cover in some sort of formal live training session. So they can do that through knowledge sharing in this social networking site.

Internet or Intranet. Half of the 20 interviewees specifically mentioned their organization provided Internet or Intranet access. In most cases, access to the Internet or Intranet resulted in interviewees discussing how they conducted searches for work. For example, a lead instructional designer described such a situation in which he engaged in informal learning:

Well the company has an Intranet that’s really well done. You can search for anything and it’ll generally find you close to what you’re searching for. Even if it doesn’t exist, it’ll find you something pretty close.

Physical workspace. Of the 20 interviewees, 15 stated that their physical workspaces facilitated informal learning. Specifically, an open, common, and shared space, addressed below in detail, was the most common feature of a learning-friendly physical workspace. It should be noted the layout of a workspace that is conducive to informal learning was sometimes the result of a conscious effort of the organization to create a physical environment that naturally facilitated informal learning. This initiative is evident in comments such as:

• Our offices are definitely set up to be collaborative, and we’re kind of moving toward this “office of the future,” is what we call it here, slowly but surely all of our offices are becoming that. But it is that lower cubed, desk-sharing . . . It’s more open, and there’s usually collaboration tables or spaces for people to get together to talk and chat.
• They make a point of placing employees near each other who are on the same team or same department or same product line, depending on what’s going on.
• It’s called a 20/20 workspace where it’s a more collaborative and open environment. We don’t have desks that are cubes, and it’s to encourage collaboration and proximity. You know, when you’re innovative, it’s those sparks that you least expect it, and they’re looking to engage, and that’s what this whole workspace is about.

In fact, one instructional design group was displaced from their building for a few months due to construction, and in the interim adopted desks in a main hallway and office of their institution. Due to the high traffic of their temporary location, the three instructional designers became accustomed to brief, daily communication with their client group. Therefore, when the time came
to design their renovated space, they made conscious decisions to integrate a learning-friendly and collaborative atmosphere into their reconstructed office. One of the designers recalled:

Since we got to pick out office furniture, we didn’t want enclosed cubicles—we wanted our walls to be desk-height, so we could still talk to each other. And we also wanted to all be facing each other. And then additionally have the L-shape where the instructor can sit down and I can share my monitor and we can look at something. We all were pretty specific in wanting those three main things when we designed our workspace. . . . We want to make our space a place where people WANT to come.

**Open, common, and shared space.** The most common characteristic of a physical workspace that facilitated informal learning was an open, common, and shared space. Twelve interviewees discussed this environmental feature and explained how the physical layout led to informal learning. For example, one instructional designer described his newly renovated workspace as, “an open floor plan where you’re still grouped by cubicles, so to speak, but your wall is low. You know, you see everyone’s eyeballs right around you.” As with many of the organizations, the goal of this shared space layout was so that employees “could really work through things, with more cooperation without walls between everybody. You could walk around just to talk to your neighbor.”

Another designer recalled an exchange with a coworker in which their close, shared workspace yielded a beneficial experience. The interviewee was sitting at her desk, reading an article in *ETRD* about providing good and bad examples, when her coworker overheard her speaking to herself. The coworker asked, “What’s that article? Can you send me that? I was JUST talking to a faculty member, that if they wanted to post an example, they should post good and bad!”
The purpose of this dissertation study was to explore the perceptions of instructional design/performance improvement (ID/PI) practitioners regarding informal workplace learning. Informal learning was examined on two levels: the practitioner (ID/PI practitioners facilitating informal learning within their organizations) and the organization (how ID/PI practitioners see their organization facilitating informal workplace learning among employees). Four research questions, aligning with the two lines of inquiry and listed below, guided this study:

- **The practitioner:**
  - Research Question 1: What types of informal learning activities do ID/PI practitioners facilitate in their organization?
  - Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

- **The organization:**
  - Research Question 3: What environmental factors do organizations provide to facilitate informal learning?
  - Research Question 4: How do organizations facilitate informal learning among their employees?

This chapter provides a discussion of the results for the research questions. Limitations, implications, and the significance of the study will also be discussed, and suggestions for future research will be offered.

**The Practitioner**

Taken together, the survey and interview data create an overall picture of ID/PI professionals’ practices. Practitioners commonly facilitate informal learning by sharing knowledge, chatting with others, engaging in work tasks, creating and curating materials, and encouraging informal learning. For example, when ID/PI professionals email team members links to practitioner articles, chat with coworkers about a project in the hallway, or populate a database with just-in-time training resources, they are initiating or making possible informal
learning within their organizations. Subsequently, these informal learning events become the impetus for additional informal learning engaged in by practitioners’ colleagues.

This understanding of the survey and interview results concurs with several empirical studies on informal learning. Baert and Govaerts (2012) also found that sharing ideas was a common method of workplace learning among members of a human resources team. Similarly, the K–12 teachers interviewed by Lohman (2003) found the casual conversations between sessions more beneficial than the professional development training for which they gathered. Moore and Klein (2015) found similar patterns among instructional design and technology graduate students. From an online survey, the researchers determined that the majority of responding students in the IDT field regularly shared materials and resources with others and also considered this type of informal learning to be useful.

The penchant of ID/PI practitioners for sharing knowledge may be due to the mutually beneficial nature of the action. For example, a practitioner may receive a useful resource from a colleague, and later reciprocate the professional favor. Ongoing two-way communication and help-giving may establish a rapport that builds an extended network of colleagues. Cultivating a diverse and competent community of professional contacts is abetted by contributing to the overall shared knowledge. Also, ID/PI practitioners may encourage and engage in the sharing of resources, knowledge, and ideas because they recognize the value of such praxes. As learning and development professionals, they most likely acknowledge the value that employee sharing and help-giving present at both the individual and organizational levels.

Additionally, 88% of survey respondents reported that they facilitated the use of job aids and tools (n=337) within their workplaces. When this is considered in tandem with the finding that a majority of interviewees facilitated informal learning by creating and curating materials (65%, n=13), additional insight into practitioners’ habits becomes apparent. When placed within the context of a busy workplace, rife with coordination meetings, overlapping projects, and tight deadlines, an informal learning activity that allows professionals to stay on-task as much as possible is expected and desired. By creating and curating materials, practitioners facilitate the use of such just-in-time learning resources.

The use of reference materials to supplement performance and learning is well documented in scholarly literature of workplace learning. Twidale (2005) recommended that computer programmers should utilize maps and crib sheets, both hardcopy and electronic, when
learning to create webpages with new technology. Additionally, he recounted how novice programmers and developers learned from referring to spreadsheet templates that were created and provided by more experienced colleagues. Similarly, Brockman and Dirkx (2006) described the strategies employed by manufacturing machine operators to overcome problems and build knowledge while working. From their interviews, the researchers found that machine operators often rely on printed materials, such as job aids, checklists, operations manuals, and procedural manuals. Given the potential benefits of such just-in-time resources, ID/PI practitioners can contribute to the effectiveness of these materials. For example, jobs aids were an informal learning tool proffered to learning professionals in T+D magazine (2012) as a “vehicle to include in your workplace learning mix” (p. 18).

The ID/PI practitioners who participated in this study most likely acknowledged the benefits of job aids, checklists, and other such tools for their client learners, and thus created and curated materials. The overall goal of these efforts, of course, is to support learning and performance. Making just-in-time information and materials available will allow for professionals to retrieve and utilize knowledge mid-task. With ID/PI practitioners’ expertise focused on learning and performance, it is not surprising that a high number of respondents indicated that they facilitated this informal learning activity.

**The Organization**

Regarding the *organization* level of inquiry, findings indicated that a majority of respondents think that their organizations are supportive of informal workplace learning—both intentionally and unintentionally. More than half of responding ID/PI practitioners reported that their organizations provided 10 of the 12 environmental factors included on the survey. Key points to surface from the results focused on the internal culture, physical workspace, and resources and tools of ID/PI practitioners’ organizations. Furthermore, the factors of these three categories are not isolated and independent—they often overlap, interact with, and influence each other.

The internal culture of a workplace encompasses its atmosphere and official policies (Choi & Jacobs, 2011; Ellinger, 2005), and an internal culture that communicates and values professional development is as a key stimulus for facilitating informal learning (Choi & Jacobs, 2011; Ellinger, 2005; Wofford, 2011; Zhao & Kemp, 2012). Data from both the open-ended survey results (70%, n=155) and one-on-one interviews (100%, n=20) in the current study
showed that most ID/PI practitioners acknowledged their organizations facilitating informal learning via elements of the internal culture. Such strong results further assert that this environmental factor influences informal workplace learning. Looking to the results of the survey matrix, half of all respondents (52%, n=200) indicated that they saw their organizations institute a learning-committed internal culture. In determining what constitutes this type of workplace culture, all 20 interviewees (100%) identified several factors of their organizations’ internal culture that facilitate informal learning. These factors included the support of (a) sharing and asking questions (90%, n=18); (b) chatting, visiting, and communicating with others (80%, n=16); (c) attending structured opportunities for learning and professional development (80%, n=16); and (d) employee learning and growth (75%, n=15).

When an internal culture encourages employees to interact with and ask questions of each other, either face-to-face or virtually, informal learning is not just allowed to occur, but promoted. That is, episodes of informal learning are no longer circumstantial events that may go unacknowledged. Instead, within a learning-committed internal culture, Twidale’s (2005) notion of socializing and “help giving” (p. 517) is a nurtured characteristic that permeates throughout a supportive workplace. Employees who are free to navigate a workspace, interact with others, and share and seek information are more likely to engage in informal learning than those consigned to a closed-off or hostile environment.

This aspect of a learning-committed internal culture segues to a second key point of discussion: the physical workspace. An internal culture that encourages employees to interact often does so through the physical layout of the workspace. Architectural and design features of an interior layout that allow interactions between employees include close proximity of individuals, low or non-existent walls, shared work space, and common areas. As pointed out by Cross (2003) and Polach (2001), professionals working in neighboring cubicles may develop friendships while working nearby and socializing, and informal learning is often a natural result of such interactions.

The results of the current study corroborate such ideas. From the online survey data, a majority of respondents reported that their organizations provided access to other employees through close proximity of seating or open floor plans (66%, n=255). Similarly, many respondents indicated their organizations provide open space for congregating, such as a lounge or common area (63%, n=244). Through these environmental features, organizations can
facilitate employee interactions and communication, and thereby informal learning. A physical workspace that facilitates informal learning does so by enhancing access to supervisors/peers (Svensson et al., 2004). That is, a physical layout that is conducive to informal workplace learning makes individuals accessible to each other. A space for congregating may lead to natural work-related discussions (Mariani et al., 2013), and having colleagues working nearby may accelerate communication among a team (Lohman and Woolf, 2001).

The third key point for discussion focuses on the resources and tools provided to employees by the organization. Survey respondents predominantly saw their organizations provide access to the Internet (87%, n=335) and funding for learning and development (66%, n=254). Supporting these findings, all 20 interviewees noted similar provisions afforded by organizations, specifically describing access to the Internet (50%, n=10) and funding (60%, n=12). Regarding the topic of Internet access, and given how prevalent Internet usage is worldwide, this finding is only surprising in that more participants did not discuss the Internet. However, they may not have directly acknowledged the full range and scope of the Internet on informal workplace learning in entirety due to its omnipresence—the Internet is so pervasive in today’s workplace that practitioners may not have thought to mention such an apparent resource.

Nevertheless, the ranking of Internet usage in the current study echoes earlier findings by Moore and Klein (2015). From an online survey, they reported that IDT graduate students found searching the Internet the most useful informal learning strategy, and therefore engaged in Internet searches most often for their informal learning. The Internet has also provided professionals with increasing access to formal and informal learning opportunities (Dennen & Wang, 2002; Lai, Wu, & Li, 2011; Livingstone & Stowe, 2007). Ellinger (2005) included the Internet in a discussion about employees’ use of tools in the workplace, and Lohman (2009) established searching the Internet as a mainstay of her research program’s eight informal workplace learning activities. When interviewing participants of a professional development program about skills necessary for informal workplace learning, Mokhtar (2010) reported that proficiency in identifying and navigating online technologies and resources was imperative. Therefore, the finding from the current study that Internet access was a common tool provided by organizations coincides well with the Internet’s central place within the literature.

In addition to the Internet, organizations also commonly offer financial support for learning and professional development initiatives, as was reported by respondents to the online
survey matrix (66%, n=254). This concept was elaborated in the open-ended comments, in that financial support could entail tuition reimbursement, incentive programs, memberships to professional organizations, conference travel and registration, up-to-date technology, and subscriptions to professional journals and magazines. Additionally, many interviewees also recounted that their organizations provide some sort of financial assistance in support of employee learning and growth (60%, n=12).

When participants discussed financial support from their organizations, both in the open-ended survey comments and one-on-one interviews, they usually relayed the need for a business case in order to secure the funds. In most circumstances, if an ID/PI practitioner justified attendance to a conference, enrollment in a workshop series, or subscription to a professional magazine, organizations would fund the initiative. Informal learning was further facilitated in that the recipient would often be required to share any knowledge or experiences with the larger group, thus expanding the reach of the initial investment.

With over half of study participants noting their organizations provided financial support, the lack of attention this environmental factor received within the literature of informal workplace learning is worth noting. Of the empirical articles examined in the literature review, only Ellinger (2005) discussed financial resources as a form of support from organizations, and even this was within the broad context of “work tools and resources” (p. 403). This discrepancy may be due to the actual practices of organizations. Even though the majority of respondents acknowledged official organizational policies that offer funding for learning and development of employees, many individuals took advantage of the survey textbox to disparage their organizations’ inefficient execution of said funds. Similarly, explanations during interviews about organization-provided financial support often coincided with complaints that securing these funds was time-consuming and often not worth the effort. Furthermore, discussions of funding for informal learning may not appear often in the literature since the topic is not directly a type of informal learning—instead it is a separate but related issue. The results of this dissertation study argue that organization-provided funds should be included within the scope of environmental factors that facilitate informal learning.

Limitations

The limitations of a research study are causes for potential weaknesses related to the findings of the study (Creswell, 2014). There were four limitations for the current dissertation
study. First, of those ID/PI practitioners who did receive and decide to complete the online form (and opt for a subsequent interview), all were volunteers. The fact that these practitioners elected to participate, while others chose not to do so, may indicate characteristics unique to the study participants that are not shared by their non-participatory colleagues.

Second, the survey’s matrices may have influenced the data collected from the open-ended survey responses. That is, within the online survey form, two matrices (one pertaining to informal learning activities and the other to environmental factors) appeared immediately prior to the respective fill-in textboxes. Respondents typing their answers may have provided comments that were biased by the content of the matrices. Although this could be viewed as the matrices prompting respondents to submit additional specific and accurate information, it is unknown what other ideas or topics respondents may have provided in the absence of the matrices.

Third, the 20 interviewees may not be fully representative of the total population of ID/PI practitioners. This limitation is due to the sampling procedures and availability of study participants. Regarding the selection of potential interviewees, those survey respondents who elected to participate in a one-on-one interview were categorized by years of professional experience, job roles, and type of organization. Individuals demonstrating a range of these demographic characteristics were invited for an interview, and invitations were continually sent until 20 practitioners completed interviews. Therefore, the range and scope of study participants may not be all encompassing.

Fourth, interviewees were selected from the pool of volunteers based on positive experiences of informal learning in their work environments—rather than for possessing insight to non-supportive organizations. This bias in interviewee selection may have yielded data representative of only a portion of ID/PI practitioners in terms of experiences and insight to informal workplace learning. For example, the results of this study overall suggest that professionals and organizational leaders are mostly supportive of and open-minded to facilitating informal learning. However, this study did not specifically pursue ID/PI practitioners with negative experiences or perspectives regarding informal workplace learning. Therefore, this study did not uncover useful details about what barriers to informal learning occur within non-supportive organizations.
Implications

The findings of this dissertation study suggest various factors likely to facilitate informal workplace learning—specifically as leveraged by ID/PI practitioners. As previously stated, the role of many ID/PI practitioners is to support the learning and performance of professionals in their places of business. When working with clients in the field, ID/PI practitioners face countless obstacles to their goal of optimal learning and performance. Firsthand accounts from interviewees noted challenges such as overwhelming numbers of personnel to train, an unrealistic amount of content to cover in training, limited funds and time, and human resources issues for high turnover rates. In efforts to overcome these barriers, practitioners may leverage elements of an organization’s internal culture, resources and tools, or physical environment to facilitate informal learning, thus achieving their goals as professionals.

Internal Culture

When considering the internal culture of an organization, practitioners may act individually to sway attitudes and the collective philosophy to a more learning-committed stance. For example, engaging others in casual conversations in the hallway or emailing a team interesting articles may foster a culture accepting of information seeking and sharing. Such modeling of informal learning activities could initiate new trends that facilitate ongoing informal workplace learning. Additionally, ID/PI practitioners could host learning events for staff or encourage time away from work tasks to attend professional development—anything that instills a personal drive or platform leading to continued learning and growth.

To cultivate a hospitable environment for informal learning at the organizational level, ID/PI practitioners may first seek backing from key stakeholders. Garnering support from organizational leaders and decision-makers may grant ID/PI practitioners the authority to facilitate informal learning throughout an organization. Such initiatives may include changing policies and initiating programs. Communicating the business advantages for informal learning (i.e., time and cost savings, network growth, development of human capital) may alleviate pushback from gatekeepers, whose cooperation is oftentimes vital for such ventures to sustain.

Resources and Tools

To ensure that informal learning has a solid foundation on which to grow, ID/PI practitioners may also confirm availability of certain resources and tools. Communication technologies, such email, instant messaging, and other collaboration tools, all dependent on
Internet access, will enable professionals to interact. Also, instituting online spaces for sharing ideas and resources, such as social media sites and online forums, allows professionals another outlet for seeking and dispersing work-related information. Providing employees with professional development funds, job aids, and a learning management system can all promote informal learning, thus leading to increased performance. Knowing the importance of resources and tools such as these, ID/PI practitioners can either make a business case for establishing such assets or further develop what set-up is currently in place.

Securing the availability of resources and tools is a first step, but state-of-the-art hardware and software are useless unless the intended user group does not utilize them (i.e., an online forum is available but never accessed). Therefore, ID/PI practitioners must also serve as advocates for the resources and tools that enable informal learning. Practitioners’ additional role of marketing and publicity was seen in interview comments about communicating the existence of job aids and resources: “We’re making this awareness that these things exist.” Furthermore, practitioners should also exert effort, if necessary, in encouraging the use of such support resources.

**Physical Environment**

The layout of a workspace can also impact the informal learning that occurs within an organization. This means that ID/PI practitioners may manipulate elements of the physical environment to influence how professionals interact. An open, shared space that lacks individual offices and separating walls provides employees with direct access to each other. A byproduct of such uninterrupted contact, of course, is informal learning, such as chatting, asking questions, observing, and collaboration. By exercising influence with key stakeholders and advocating for a space conducive to informal learning, ID/PI practitioners can create a workplace that naturally encourages employees to interact and learn with each other. Even if organizational leaders deny a major renovation for a “fancy space office of the future,” as one interviewee referred to her newly redesigned and furnished downtown office, ID/PI practitioners should be knowledgeable in how architectural elements affect human behavior. For example, an ID/PI practitioner could avoid a long-term and costly overhaul of a building by placing a high-demand tool, such as a printer or coffee pot, near a pod of offices. Resulting traffic may yield increased interactions.
Recommendations for ID/PI Practitioners

It is worth noting that ID/PI practitioners can apply these suggestions to support both their client learners and coworkers. For example, practitioners can advocate for a redesign of an office space and produce job aids for a client group or her immediate team. Additionally, an ID/PI practitioner may prompt training facilitators to integrate their personal on-the-job experiences into workshop sessions, similar to encouraging team members to share their lessons learned.

Informal learning strategies should be considered as tools stored within an instructional designer’s toolbox (Wager, 2005). Practitioners work within the constraints of an organization to support learning and performance; they must provide effective and efficient solutions that coincide with a company’s budget, culture, and needs. Practitioners can analyze the existing organizational structure and resources, and then engineer appropriate informal learning strategies to meet the organizations’ unique needs within the predefined scope. As was often communicated through survey and interview comments, organizations commonly are lacking ready funds to maintain continual growth of their human capital; thus ID/PI practitioners are increasingly turning to informal learning strategies to make up this difference (i.e., they rely on informal learning to promote professional development and competitiveness). Identifying the appropriate informal learning approaches and how to effectively integrate them within the organization’s existing culture may be a new competency of ID/PI practitioners.

Also worthy of discussion is the phenomenon that informal learning can be facilitated within organizations via cognizant, intentional efforts, as well as incidental, unintentional means. Furthermore, this intentional or unintentional facilitation may result from actions of ID/PI practitioners or their organizations. For example, ID/PI practitioners can intentionally recruit colleagues to engage in lunch-and-learn events in a direct effort to facilitate informal learning, or unintentionally fall into conversation with a coworker in the hallway about a useful online resource. Similarly, organizational leaders can intentionally provide funding resources for conference travel or journal subscriptions in an effort to promote informal learning. On the other hand, organizations may already provide employees with access to the Internet while at work without the intention of promoting their informal learning. In light of this, the goal of ID/PI practitioners to foster a workplace environment that is conducive to informal learning grows in importance. By utilizing the strategies discussed in this dissertation, practitioners may be able to
nurture a workplace that promotes informal learning, thus increasing the probability of incidental informal learning events.

Overall, ID/PI practitioners should create a workplace that is conducive to learning and growth. One way to accomplish this is by building an environment and culture that facilitate informal learning, which are more possible through rapports with organizational decision-makers. The specific factors that comprise the environmental and cultural aspects have been explored in detail throughout this dissertation, and findings verified by practitioners in the ID/PI field.

**Significance of the Study and Future Research**

This dissertation suggested a more comprehensive list of informal learning activities than currently found in the literature. The goal of this more detailed catalogue was to help clarify—without controlling or prescribing the organic and intangible nature—the spectrum of what informal workplace learning can entail. The lists of example activities provided by other scholars are useful in defining informal learning (eLearning Guild, 2014; Lohman, 2005; Moore & Klein, 2015; Noe, Tews, & Marand; 2013; Watkins & Cervero, 2000), yet such broad inventory items do not capture much of what is occurring within this complex topic. Therefore, the list of 55 total informal learning activities examined in this study is a more comprehensive list of informal workplace learning activities, drawing from various empirical and theoretical publications. However, even this list is problematic in that no list of activities will fully capture the extent and range of informal learning due to the spontaneous and malleable nature of informal learning. Admittedly, this is a complicated situation: describe too much too rigidly and the free-flowing nature of informal learning is lost, but omit too much information and the minute details of informal learning are not captured.

Future researchers interested in informal workplace learning have many avenues to pursue. While this dissertation study focused on the perceptions of ID/PI practitioners currently working in organizations, future researchers could pursue informal workplace learning from the perspective of employees other than ID/PI practitioners.

Also, and although challenging by nature, identifying a way to determine the cost benefits of informal learning strategies implemented in organizations would greatly inform the potential benefits of informal workplace learning. Certain factors of interest would include retention rates, job performance, and job satisfaction among employees when informal learning
is actively facilitated within organizations. This study did not capture data regarding these factors, and future researchers could investigate how these factors are influenced when informal learning is supported and facilitated within an organization (i.e., Are more employees retained when informal learning is supported by the organization? Does employee performance improve when informal learning is supported by the organization?).

Future research may also investigate in more detail how characteristics of ID/Pl practitioners influence their practices of facilitating informal workplace learning. This study captured demographic information about participants, such as gender, years or professional experience, and type of organization, among others, but these factors were not analyzed to determine patterns of practice regarding informal learning facilitation. It would be worthwhile to examine if expertise/years of professional experience in the ID/PI field influences practitioners’ habits of facilitating informal learning, or if the type of organization that employs ID/PI practitioners affects habits of facilitating informal learning.

Additionally, further exploration of the barriers to informal learning would also be useful. That is, attention could be devoted to the business aspects of ID/PI projects and how practitioners must juggle these constraints. Research into the solitary and collaborative natures of informal learning activities would also be beneficial.

Informal workplace learning is not a new topic for researchers. Various scholars have examined what constitutes informal learning and how it contributes to workplace learning and performance (Boud & Middleton, 2003; Brockman & Dirkx, 2006; Choi & Jacobs, 2011; Ellinger, 2005; Livingstone, 2001). This dissertation expanded the literature of informal workplace learning by investigating the topic from the perspective of ID/PI professionals, specifically how they facilitate informal learning and how they see their organizations facilitate informal learning in the workplace. By exploring the perceptions of ID/PI professionals, this dissertation research uncovered current practices occurring in organizations, as well as ID/PI practitioners’ judgments regarding those conventions. Instructional design and performance improvement professionals may use these findings to increase the extent to which employees within their organizations make use of informal learning activities to facilitate their learning and workplace performance.
APPENDIX A

SURVEY INSTRUMENT

Link to survey instrument: https://fsu.qualtrics.com/SE/?SID=SV_80JylYnrAtHTzsF

Thank you for your interest in this study. The purpose of this survey is to learn about the perceptions and practices of informal learning among instructional design and performance improvement (ID/PI) practitioners working in organizations.

Informal learning in the workplace refers to professionals seeking and gaining knowledge outside of formal training events. Examples of informal learning activities in the workplace can include, among other things:

- finding answers online via a computer or mobile device,
- sharing professional development tips with peers,
- chatting about how to use a technology, and
- sharing resources and knowledge for professional work.

These activities are informal when individuals participate on their own initiative rather than for the purposes of training sessions or as directed by a supervisor.

For this survey, please respond to each of the following items and select the answer that is most accurate for you. All information you provide will remain confidential, to the extent allowed by law, and will only be used by the researchers. This survey consists of two sections and should take less than 15 minutes to complete. Your participation in this study is voluntary and you can stop taking this survey at any time. There are no foreseeable risks to you for contributing to this study. If you would like additional information about this study, please contact (a) Alison L. Moore at alm06k@my.fsu.edu or (b) the IRB Office of Florida State University at (850) 644-7900.

Click the button below if you agree to participate in this study.
SECTION I: DEMOGRAPHICS

Please indicate your gender.

- Male
- Female

What is your age?

- Younger than 20
- 20–29
- 30–39
- 40–49
- 50–59
- 60–69
- 70 and older

What is the highest degree and/or certificate you have earned in instructional design, performance improvement, or a related field?

- Professional certificate
- Bachelors degree
- Master’s degree
- Specialist degree
- Doctorate
- N/A

From what academic institution(s) did you earn your instructional design/performance improvement degree/certificate?
How many years of professional experience do you have in the instructional design/performance improvement field?

- Less than 1 year
- 1 – 5 years
- 6 – 10 years
- More than 10 years

Which of the following best describes your primary job function?

- Manager
- Project lead designer
- Designer
- Developer
- Trainer
- Subject matter expert
- Consultant
- Other

Are the clients that you support within your instructional design/performance improvement role primarily internal, external, or both?

- Internal
- External
- Both
How many employees are in your organization worldwide? (Make your best guess.)

- I am a sole proprietor.
- 2 – 10
- 11 – 50
- 51 – 100
- 101 – 500
- 501 – 1,000
- 1,001 – 10,000
- 10,001 – 50,000
- 50,001 – 100,000
- More than 100,000
- I don't know.

What type of business is your organization? (Pick one.)

- Educational institution
- Government
- Software development
- Manufacturing
- Telecommunications
- Association/Nonprofits
- Financial services
- Health care
- Military
- Retail
- Utilities
- Transportation
- Pharmaceuticals
- Other
SECTION II: INFORMAL LEARNING

To complete the last portion of the survey, please refer to the following description of informal learning activities.

Examples of informal learning in the workplace can include, among other things:

- finding answers online via a computer or mobile device,
- sharing professional development tips with peers,
- chatting about how to use a technology, and
- sharing resources and knowledge for professional work.

These activities are informal when individuals participate on their own initiative rather than for the purposes of training sessions or a supervisor's direction.

In the table below:
Please select by checking the appropriate boxes those informal learning activities that you facilitate within your organization to support learning and performance.

NOTE: In this context, *facilitate* can mean integrating informal learning into deliverables, encouraging clients or team members to engage in informal learning, designing programs that incorporate elements of informal learning, etc.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Facilitate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read professional magazines and reference materials</td>
<td></td>
</tr>
<tr>
<td>Use job aids, checklists, tools, videos, etc.</td>
<td></td>
</tr>
<tr>
<td>Use computerized information bases (e.g., EPSS, database)</td>
<td></td>
</tr>
<tr>
<td>Search the Internet for job-relevant information</td>
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<tr>
<td>Use social media (e.g., engage with others, read blogs/feeds, blog as an individual/team)</td>
<td></td>
</tr>
<tr>
<td>Share materials, resources, and knowledge</td>
<td></td>
</tr>
<tr>
<td>Establish/contribute to communities of practice</td>
<td></td>
</tr>
<tr>
<td>Attend/present at conferences</td>
<td></td>
</tr>
<tr>
<td>Participate in mentoring and/or coaching</td>
<td></td>
</tr>
<tr>
<td>Get performance expectations from supervisors/clients and/or set personal performance expectations/objectives</td>
<td></td>
</tr>
<tr>
<td>Interact with supervisors/peers (e.g., chat over the cubicle, water cooler encounters)</td>
<td></td>
</tr>
<tr>
<td>Participate in work/job shadowing (e.g., shadow someone/be shadowed)</td>
<td></td>
</tr>
<tr>
<td>Observe supervisors/peers in the process of performing work tasks</td>
<td></td>
</tr>
<tr>
<td>See models of best practice/finished products</td>
<td></td>
</tr>
<tr>
<td>Work with supervisors/peers (e.g., collaborate, problem solve, explore solutions to real problems, decide on actions)</td>
<td></td>
</tr>
<tr>
<td>Engage in trial and error/experiment</td>
<td></td>
</tr>
<tr>
<td>Get tips from supervisors/peers</td>
<td></td>
</tr>
<tr>
<td>Get/provide performance feedback with supervisors/peers/clients (e.g., critiquing sessions)</td>
<td></td>
</tr>
<tr>
<td>Review (as an individual or team) significant trends, new regulations, and other issues which may affect professional practice</td>
<td></td>
</tr>
<tr>
<td>Reflect as an individual or team (e.g., reflect on experiences/about how to improve performance, work out loud, blog/share experiences)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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</tbody>
</table>

As an ID/PI practitioner, I facilitate the following informal learning activities within my organization:
In the table below:
Please select by checking the appropriate boxes if your organization facilitates informal learning by providing the following resources/supports.

<table>
<thead>
<tr>
<th>Resource/Support</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to supervisors/peers (e.g., close proximity to others, open floor plan of workspace)</td>
<td>☐</td>
</tr>
<tr>
<td>Open space for congregating (e.g., lounge, lobby, common area)</td>
<td>☐</td>
</tr>
<tr>
<td>Technology (e.g., hardware, software, EPSS)</td>
<td>☐</td>
</tr>
<tr>
<td>Access to professional magazines/journals</td>
<td>☐</td>
</tr>
<tr>
<td>Membership to professional organizations</td>
<td>☐</td>
</tr>
<tr>
<td>Financial support to attend/present at conferences</td>
<td>☐</td>
</tr>
<tr>
<td>Access to resources via the Internet</td>
<td>☐</td>
</tr>
<tr>
<td>Community(ies) of practice (face-to-face or online)</td>
<td>☐</td>
</tr>
<tr>
<td>Mentorship/coaching programs</td>
<td>☐</td>
</tr>
<tr>
<td>Time for learning (e.g., freedom to learn during the workday, control of time devoted to learning/working)</td>
<td>☐</td>
</tr>
<tr>
<td>Learning-committed managers (e.g., managers who support/reward learning)</td>
<td>☐</td>
</tr>
<tr>
<td>Learning-committed internal culture (e.g., policies/programs support learning, resources/incentives encourage learning)</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please describe how you, an ID/PI practitioner, facilitate informal learning within your organization to support learning and performance. For example, how do you encourage employees to engage in informal learning activities? How do you incorporate informal learning elements in deliverables for clients?

Please describe how your organization facilitates informal learning. For example, think about your organization's resources and culture. What tools, supports, or incentives exist within your organization that support (or hinder) informal learning (at an individual level or among groups of employees)?

If you are interested in participating in a follow-up interview via telephone or Skype, please enter your name and preferred contact information below and the researcher will contact you (first by email).

<table>
<thead>
<tr>
<th>Information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>First name</td>
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<tr>
<td>Last name</td>
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<tr>
<td>Email address</td>
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<tr>
<td>Skype id</td>
<td></td>
</tr>
<tr>
<td>Phone number</td>
<td></td>
</tr>
</tbody>
</table>
That's it.
Thank you very much for your help!
APPENDIX B

COVER LETTERS

Message to leaders of professional organizations:

Hello, [name here].

I’m writing to request your assistance in sharing an online survey with your organization’s members. A doctoral student of mine, Alison L. Moore, is preparing to conduct her dissertation study (with IRB approval) on informal workplace learning and we would greatly appreciate your assistance in recruiting participants. The target population for this survey research is instructional design and performance improvement practitioners.

Would you be able to share the secure survey link with your organization’s members? You can simply copy/paste/distribute the message listed below. Please make the link available via listserves, email, etc. and encourage recipients to read about the study. The survey should take less than 15 minutes to complete.

It’d be very kind of you to let me know if you share this invitation so we can track all survey activity/responses. Also, feel free to pass this survey along to other groups that you think may be willing to participate—if you’ve received this survey through another source, please excuse any cross postings!

Please let me know if you have any questions. Should you wish to contact Alison, send emails to [email here].

Thank you very much for your help!

All the best,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

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Dear Instructional Design/Performance Improvement Practitioner,

A team from Florida State University is conducting a research study regarding your perceptions and practices of informal workplace learning. Your input will greatly help us and our survey should take approximately 15 minutes to complete.

Follow the link below (or copy/paste the entire URL into your browser) to access the online survey.

Survey link: https://fsu.qualtrics.com/SE/?SID=SV_80JylYnrAtHTzsF

Your input is very important to us and will be kept strictly confidential (used only for the purposes of this research project).

Please feel free to pass this survey along to other groups/individuals who you think may be willing to participate. If you have any questions, please send emails to [email here].

Sincerely,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

Alison L. Moore
Doctoral Candidate
Educational Psychology & Learning Systems
Florida State University
Message to contacts of academic ID/PI programs:

Hello, [name here].

I'm writing to request your assistance in sharing an online survey with your program's alumni network. A doctoral student of mine, Alison L. Moore, is preparing to conduct her dissertation study (with IRB approval) on informal workplace learning and we would greatly appreciate your assistance in recruiting participants. The target population for this survey research is instructional design and performance improvement practitioners.

Would you be able to share the secure survey link with your program's alumni network? You can simply copy/paste/distribute the message listed below. Please make the link available via listserves, email, etc. and encourage recipients to read about the study. The survey should take less than 15 minutes to complete.

It'd be very kind of you to let me know if you share this invitation so we can track all survey activity/responses. Also, feel free to pass this survey along to other groups that you think may be willing to participate.

Please let me know if you have any questions. Should you wish to contact Alison, send emails to [email here].

Thank you very much for your help!

All the best,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

------

Dear Instructional Design/Performance Improvement Practitioner,

A team from Florida State University is conducting a research study regarding your perceptions and practices of informal workplace learning. Your input will greatly help us and our survey should take approximately 15 minutes to complete.

Follow the link below (or copy/paste the entire URL into your browser) to access the online survey.

Survey link: https://fsu.qualtrics.com/SE/?SID=SV_80JylYnrAtHTzsF

Your input is very important to us and will be kept strictly confidential (used only for the purposes of this research project).

Please feel free to pass this survey along to other groups/individuals who you think may be willing to participate. If you have any questions, please send emails to [email here].

Sincerely,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

Alison L. Moore
Doctoral Candidate
Educational Psychology & Learning Systems
Florida State University
APPENDIX C

INTERVIEW PROTOCOL AND SCRIPT

Interviewer:

Hello and thank you again for agreeing to participate in this study.

My name is Alison and we’ll be chatting about your experiences with informal learning in your place of work. I have about six questions for you and I’m aiming to limit our call to 30 minutes.

Since this interview is for my dissertation study, I’m planning to record our conversation. I’m going to transcribe our conversation for my data analysis, and when I’ve completed my study, I’ll delete all of records of this interview. I won’t refer to you by name, or your place of business. With these precautions for confidentiality, is it alright with you that I record our call?

So before we get started, do you have any questions for me?

I’ll start by asking you to describe your role at work and your organization. This will give me a good sense of the context of your experiences.

1. Please describe the work you do.
   a. What is your primary job title? (Still the same as <online form response>?)
   b. What is your main function within this role? What are your typical tasks within this role?

And now I’d like to move on to your organization.

2. Please briefly describe your organization.
   a. What type of organization do you work for? I saw on your survey response, you selected <online form response>.
   b. How accessible are coworkers to each other?
      i. Physical layout of workspaces (open, mazes, etc.)
      ii. Cubicle, offices, desks, location of people, etc.
   c. Access to work tools and resources
      i. What type of access to technology (hardware/software), literature, etc. is available?
   d. Time for learning/flexible schedule
      i. What amount of freedom is available for employees to dictate their schedules for learning/working?
   e. What is the management attitude (learning-committed management; open to/supportive of learning) toward learning?
      i. Create informal learning opportunities
      ii. Serve as developers (coaches and mentors)
      iii. Visibly support and make space for learning
      iv. Encourage risk taking
v. Instill the importance of sharing knowledge and developing others
f. What is the internal culture towards learning?
   i. Atmosphere: Layout
   ii. Official policies: Programs, regulations, incentives systems
   iii. Available resources
       A. Technology, work tools, and job characteristics
       B. Tuition reimbursement, libraries of reference material, subscriptions to professional journals, video and computer-based courses
       C. Workplace and workload variety, participation, coaching, organizational earning climate, functional level, and number of employees

Now I’d like to discuss the types of informal learning activities that YOU facilitate within your organization. And HOW you facilitate them. So as a practitioner, with an expertise in learning and performance of professionals, what ....

3. . . . types of informal learning activities do you facilitate in your organization?
   a. (Look at list of informal learning activities)
   b. Towards your peers or clients?

4. And second: How do you facilitate this informal learning in your organization?
   a. How does your professional expertise influence your decision?
   b. How do you decide what types of informal learning to facilitate?
   c. How does the organizational culture you described influence your decision?

Now we’ll move to focusing on your organization again. As we just discussed with your role, I’d like you to describe the types of informal learning you see your organization facilitate among employees, and also HOW your organization facilitates this informal learning.

5. So first: What types of informal learning activities does your organization facilitate among employees? In your survey response, I see you didn’t indicate . . .
   a. (Look at list of informal learning activities.)

6. And second: How does your organization facilitate informal learning among employees?
   a. What forms of support does your organization have in place that:
      i. Support/allow informal learning among employees?
      ii. Hinder informal learning among employees?
   c. Environmental factors:
      i. Access to coworkers
         A. Physical layout of workspaces (open, mazes, etc.)
         B. Cubicle, offices, desks, location of people, etc.
      ii. Access to work tools and resources
         A. Technology (hardware/software), literature, etc.
      iii. Time for learning/flexible schedule
         A. Freedom to dictate schedule for (or devote time to) learning/working
iv. Management attitude (learning-committed management; open to/supportive of learning)
   A. Create informal learning opportunities
   B. Serve as developers (coaches and mentors)
   C. Visibly support and make space for learning
   D. Encourage risk taking
   E. Instill the importance of sharing knowledge and developing others,

v. Internal culture
   A. Atmosphere: Layout
   B. Official policies: Programs, regulations, incentives systems,
   C. Available resources
      I. Technology, work tools, and job characteristics
      II. Tuition reimbursement, libraries of reference material, subscriptions to professional journals, video and computer-based courses
      III. Workplace and workload variety, participation, coaching, organizational earning climate, functional level, and number of employees

7. What types of informal learning do you find the most useful? Why? In what ways (professional and organizational levels)?

8. Do you have any further ideas or stories about informal learning and ID/PI practitioners you’d like to share?

That concludes my list of questions. Do you have any final questions or comments for me? Thank you very much for your time! I appreciate your help!
APPENDIX D

IRB APPROVAL LETTERS

Office of the Vice President for Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 04/22/2015
To: Alison Moore
Address:
Dept.: INSTRUCTIONAL SYSTEMS DESIGN
From: Thomas L. Jacobson, Chair
Re: Use of Human Subjects in Research
The Business of Informal Learning: A Survey of Instructional Design and Performance Improvement Practitioners

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above has been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 04/20/2016 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: James Klein Advisor
HSC No. 2015.15321
RE-APPROVAL MEMORANDUM

Date: 02/24/2016

To: Alison Moore

Address: 1510A N. Duval Street, Tallahassee FL 32303

Dept.: INSTRUCTIONAL SYSTEMS DESIGN

From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research: The Business of Informal Learning: A Survey of Instructional Design and Performance Improvement Practitioners

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 02/22/2017, you must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: HSC No. 2016.17594
Reminder message to leaders of professional organizations:

Hello again, [name here].

I sent a similar message three weeks ago and wanted to follow up with you.

I’m writing to request your assistance in sharing an online survey with your organization’s members. A doctoral student of mine, Alison L. Moore, is preparing to conduct her dissertation study (with IRB approval) on informal workplace learning and we would greatly appreciate your assistance in recruiting participants. The target population for this survey research is instructional design and performance improvement practitioners.

Would you be able to share the secure survey link with your organization’s members? You can simply copy/paste/distribute the message listed below. Please make the link available via listserves, email, etc. and encourage recipients to read about the study. The survey should take less than 15 minutes to complete.

It’d be very kind of you to let me know if you share this invitation so we can track all survey activity/responses. Also, feel free to pass this survey along to other groups that you think may be willing to participate.

Please let me know if you have any questions. Should you wish to contact Alison, send emails to [email here].

Thank you very much for your help!

All the best,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

----------

Dear Instructional Design/Performance Improvement Practitioner,

A team from Florida State University is conducting a research study regarding your perceptions and practices of informal workplace learning. Your input will greatly help us and our survey should take approximately 15 minutes to complete.

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Your input is very important to us and will be kept strictly confidential (used only for the purposes of this research project).

Please feel free to pass this survey along to other groups/individuals who you think may be willing to participate. If you have any questions, please send emails to [email here].

Sincerely,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

Alison L. Moore
Doctoral Candidate
Educational Psychology & Learning Systems
Florida State University
Reminder message to contacts of academic ID/PI programs:

Hello again, [name here].

I sent a similar message three weeks ago and wanted to follow up with you.

I’m writing to request your assistance in sharing an online survey with your program’s alumni network. A doctoral student of mine, Alison L. Moore, is preparing to conduct her dissertation study (with IRB approval) on informal workplace learning and we would greatly appreciate your assistance in recruiting participants. The target population for this survey research is instructional design and performance improvement practitioners.

Would you be able to share the secure survey link with your program’s alumni network? You can simply copy/paste/distribute the message listed below. Please make the link available via listserves, email, etc. and encourage recipients to read about the study. The survey should take less than 15 minutes to complete.

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Please let me know if you have any questions. Should you wish to contact Alison, send emails to [email here].

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All the best,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

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Dear Instructional Design/Performance Improvement Practitioner,

A team from Florida State University is conducting a research study regarding your perceptions and practices of informal workplace learning. Your input will greatly help us and our survey should take approximately 15 minutes to complete.

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Your input is very important to us and will be kept strictly confidential (used only for the purposes of this research project).

Please feel free to pass this survey along to other groups/individuals who you think may be willing to participate. If you have any questions, please send emails to [email here].

Sincerely,
James D. Klein
Educational Psychology & Learning Systems
Florida State University

Alison L. Moore
Doctoral Candidate
Educational Psychology & Learning Systems
Florida State University
APPENDIX F

TRACKING SPREADSHEET FOR SURVEY RESPONSES

Spreadsheet tab for tracking responses from professional organizations:
Spreadsheet tab for tracking responses from academic ID/PI programs:

<table>
<thead>
<tr>
<th>University</th>
<th>Program name</th>
<th>Email</th>
<th>Contact person</th>
<th>Week 1 email sent</th>
<th>Week 3 email sent</th>
<th>Response received (email or survey)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>
APPENDIX G

TRACKING SPREADSHEET FOR INTERVIEW SCHEDULES

Spreadsheet tab for scheduling interviews:
## APPENDIX H

### CODING FORM

<table>
<thead>
<tr>
<th>Survey Response</th>
<th>Your Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ex.</strong> I facilitate informal learning by sharing access to all the handouts and manuals that I put together for my clients. Mostly when I am approached with a problem someone is experiencing I might suggest one of the items in the checklist above. Less frequently I might see someone experiencing a glitch and interject a suggestion. This could be as simple as - &quot;Google it&quot; or check with so-and-so, they ran into this last week.</td>
<td>8 2 8 9 1</td>
</tr>
<tr>
<td><strong>Ex.</strong> I model it for them. For clients, I share resources that I've found from social media, internet searching, research, etc.</td>
<td>1</td>
</tr>
<tr>
<td><strong>1</strong> I model it for them. For clients, I share resources that I've found from social media, internet searching, research, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>2</strong> I encourage informal learning by directing faculty members to others in the institution who are engaged in or use instructional technology in a way they may find useful.</td>
<td></td>
</tr>
<tr>
<td><strong>3</strong> In 2015 my group has been developing a mentoring/shadowing program for new employees in sales and sales-related positions. Within our own work group, we have a Yammer site for sharing resources, ideas, and information. I serve as a coach to one individual in the organization.</td>
<td></td>
</tr>
<tr>
<td><strong>4</strong> Encouragement is provided for military personnel at distant locations to seek mentors and supervisory consultations as means to enhance informal learning. / Informal learning is designed, tailored, and intended as a supplementary source of learning for military personnel.</td>
<td></td>
</tr>
<tr>
<td><strong>5</strong> After finding relevant information, it is shared through email, face-to-face discussions, or in faculty training. Support is provided through the creation of video, interactive content, and both group and individual meetings. I am always available to answer questions and usually go to the other persons work area to talk them through the process instead of just making the changes.</td>
<td></td>
</tr>
<tr>
<td><strong>6</strong> Encourage to seek out best practices. Look at examples of others. Read tips and tricks that are given in forums. Encourage to go to conferences/additional learning opportunities.</td>
<td></td>
</tr>
<tr>
<td><strong>7</strong> Recommend finding answers or solutions by searching the Internet, networking via Social Media, join a community of practice, and/or read relevant journals/newsletters.</td>
<td></td>
</tr>
<tr>
<td><strong>8</strong> I promote my own activities as a model for success. I publicize resources and recommend them face-to-face whenever appropriate.</td>
<td></td>
</tr>
<tr>
<td><strong>9</strong> I promote it and share links or materials on our internal social media.</td>
<td></td>
</tr>
<tr>
<td><strong>10</strong> Strong individual friendships</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>11</td>
<td>We are designing a series of Communities of Practice that will provide content (job aids, reference documentation, sites, etc.), user-generated best practices and success stories, and social networking.</td>
</tr>
<tr>
<td>12</td>
<td>Digital curation using blog and social media to facilitate multiple personal learning networks for sub-disciplines of HPT.</td>
</tr>
<tr>
<td>13</td>
<td>I seek out interesting information, videos, articles online and share out to those who may benefit. In my design work I may offer external sources to allow learner an opportunity for exploration.</td>
</tr>
<tr>
<td>14</td>
<td>One dedicated team member does OJT (on-the-job) for 20 person ISD team</td>
</tr>
<tr>
<td>15</td>
<td>Share links to important articles / Share tips I come across</td>
</tr>
<tr>
<td>16</td>
<td>I search for and pass on relevant information to peers. I collaborate with some peers on projects. I participate in a work group team for professional development.</td>
</tr>
<tr>
<td>17</td>
<td>I expect the people I work with to figure things out. I explain to my clients where they can find information for themselves.</td>
</tr>
<tr>
<td>18</td>
<td>As an ID at a university, participate in the informal learning of our faculty by answering phone calls and emails related to teaching in an online environment. These questions can be pedagogically, accessibility, or technology based. I provide instruction for them myself, direct them to videos, direct them to our faculty development website for training, or direct them to websites that fit their needs.</td>
</tr>
<tr>
<td>19</td>
<td>I have used conversation and presentations to facilitate informal learning internally within my organization. We do not do much externally with clients.</td>
</tr>
<tr>
<td>20</td>
<td>I organize a brown bag workshop once a quarter to talk about problems, trends, new applications of the computer program that we use to construct our e-learning courses.</td>
</tr>
</tbody>
</table>
Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connect individuals</td>
</tr>
<tr>
<td>2</td>
<td>Create and curate materials and learning objects</td>
</tr>
<tr>
<td>3</td>
<td>Create and support a community of practice or professional network</td>
</tr>
<tr>
<td>4</td>
<td>Create learning-friendly environment</td>
</tr>
<tr>
<td>5</td>
<td>Create social media presence</td>
</tr>
<tr>
<td>6</td>
<td>Develop mentoring, coaching, internship, or job shadowing program</td>
</tr>
<tr>
<td>7</td>
<td>Develop social rapport and association with others</td>
</tr>
<tr>
<td>8</td>
<td>Encourage, facilitate, promote informal learning</td>
</tr>
<tr>
<td>9</td>
<td>Engage in informal learning activities</td>
</tr>
<tr>
<td>10</td>
<td>Host learning events</td>
</tr>
<tr>
<td>11</td>
<td>Identify client needs, challenges, and problems to solve</td>
</tr>
<tr>
<td>12</td>
<td>Incorporate informal learning into instructional materials</td>
</tr>
<tr>
<td>13</td>
<td>Incorporate new skills into work tasks to grow individual</td>
</tr>
<tr>
<td>14</td>
<td>Make oneself available and communicate open door policy</td>
</tr>
<tr>
<td>15</td>
<td>Model, talk about, and assist in informal learning activities</td>
</tr>
<tr>
<td>16</td>
<td>Provide recognition for success and certifications</td>
</tr>
<tr>
<td>17</td>
<td>Support personal learning paths and goals</td>
</tr>
<tr>
<td>18</td>
<td>Utilize workplace environment and resources</td>
</tr>
</tbody>
</table>
APPENDIX I

RESEARCH QUESTION 2:
FULL BREAKDOWN OF SURVEY AND INTERVIEW RESULTS

Research Question 2: How do ID/PI practitioners facilitate informal learning in their organization?

<table>
<thead>
<tr>
<th>Method by which ID/PI Practitioners Facilitate Informal Learning in the Workplace</th>
<th>Frequency* Survey</th>
<th>Frequency* Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect individuals</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Create and curate materials and learning objects</td>
<td>55</td>
<td>13</td>
</tr>
<tr>
<td>Create and support a community of practice or professional network</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Create learning-friendly environment</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Create social media presence</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Develop mentoring, coaching, internship, or job shadowing program</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Develop social rapport and association with others</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Encourage, facilitate, promote informal learning</td>
<td>86</td>
<td>13</td>
</tr>
</tbody>
</table>

*What informal learning activities are encouraged?
- Attend and present at conferences | 6 | 1 |
- Attend or host unstructured learning events | 8 | 1 |
- Attend or host structured learning events | 8 | 2 |
- Conduct web searches | 4 | 0 |
- Connect, discuss, and collaborate with others | 12 | 4 |
- Develop or participate in mentorship and internship program | 7 | 1 |
- Develop personal learning goals | 1 | 1 |
- Email | 1 | 0 |
- Engage in informal learning | 9 | 4 |
- Engage on social media | 15 | 2 |
- Establish public reinforcement of informal learning | 0 | 0 |
- Experiment and don’t worry about mistakes | 7 | 1 |
- Integrate informal learning into instructional materials | 4 | 0 |
- Join committees and professional organizations | 5 | 1 |
- Participate in or create community of practice or professional network | 7 | 1 |
- Read and author literature, blogs, and newsletters | 8 | 0 |
- Reflect on experiences | 3 | 1 |
- Share ideas, knowledge, and examples with others | 20 | 4 |
- Utilize available resources | 7 | 5 |
<table>
<thead>
<tr>
<th>View and emulate examples</th>
<th>4</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage in informal learning activities</td>
<td>132</td>
<td>19</td>
</tr>
<tr>
<td><strong>In what informal learning activities are engaged?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attend and present at conferences</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Attend structured learning events</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Chat and ask questions</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>Collaborate and brainstorm with others</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Conduct web searches</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Demonstrate work tasks and skills</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Engage in trial and error, experiment, and explore</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Engage in work tasks</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Engage on social media</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Observe others</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Participate in coaching and mentoring</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Participate in community of practice and professional network</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Provide feedback</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Read and author literature, blogs, and newsletters</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Reflect on experiences</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Seek feedback and input</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Share knowledge</td>
<td>85</td>
<td>17</td>
</tr>
</tbody>
</table>

**What knowledge is shared?**

| Answers to questions | 4 | 3 |
| Best practices | 12 | 4 |
| Information learned at conferences, during webinars, etc. | 3 | 3 |
| Information and ideas | 23 | 6 |
| Literatures, research, and articles | 21 | 10 |
| Links to resources and materials | 43 | 9 |
| Trends and tools | 9 | 3 |
| Work examples | 4 | 3 |

**How is the knowledge shared?**

<p>| Via demonstration | 3 | 0 |
| Via email | 14 | 12 |
| Via instant messenger or chat room | 1 | 1 |
| Via instructional materials or structured learning | 6 | 1 |
| Via meetings | 6 | 8 |
| Via newsletters | 2 | 1 |
| Via phone calls | 1 | 1 |
| Via social media | 10 | 4 |
| Via word of mouth and face-to-face | 11 | 6 |
| Use checklist, job aids, and databases | 2 | 2 |</p>
<table>
<thead>
<tr>
<th>Activity</th>
<th>Count 1</th>
<th>Count 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host learning events</td>
<td>41</td>
<td>10</td>
</tr>
<tr>
<td>Identify client needs, challenges, and problems to solve</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Incorporate informal learning into instructional materials</td>
<td>41</td>
<td>7</td>
</tr>
<tr>
<td>Incorporate new skills into work tasks to grow individual</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Make oneself available and communicate open door policy</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Model, talk about, and assist in informal learning activities</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>Provide recognition for success and certifications</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Support personal learning paths and goals</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Utilize workplace environment and resources</td>
<td>39</td>
<td>10</td>
</tr>
</tbody>
</table>

*NOTE: The total number of respondents for the (a) open-ended item aligned with Research Question 2 was 259 and (b) interviews was 20.*
APPENDIX J

RESEARCH QUESTION 4:
FULL BREAKDOWN OF SURVEY AND INTERVIEW RESULTS

Research Question 4: How do organizations facilitate informal learning among their employees?

<table>
<thead>
<tr>
<th>Method by which ID/PI Practitioners See Organizations Facilitate Informal Learning in the Workplace</th>
<th>Frequency* Survey</th>
<th>Frequency* Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal culture</td>
<td>155</td>
<td>20</td>
</tr>
<tr>
<td>What catalyst of informal learning does the internal culture encourage, allow, or provide?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A fast pace and innovation</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Chatting and visiting with others</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Coaching and mentorship</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Community of practice and professional network</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Creativity</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Feedback</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Flexible schedule</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Freedom of work location</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Job rotation, autonomy in roles, and freedom to hold other jobs</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Learning and growth</td>
<td>51</td>
<td>15</td>
</tr>
<tr>
<td>Membership and leadership roles</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Personal learning plans and goals</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Positive management attitude and capable managers</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Public/1-on-1 recognition</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Research and publication</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Sharing and asking questions</td>
<td>28</td>
<td>18</td>
</tr>
<tr>
<td>Social connections and friendship</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Structured opportunities for learning</td>
<td>47</td>
<td>16</td>
</tr>
<tr>
<td>Teamwork and collaboration</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Unstructured opportunities for learning</td>
<td>37</td>
<td>13</td>
</tr>
<tr>
<td>Resources and tools</td>
<td>130</td>
<td>20</td>
</tr>
<tr>
<td>Desktop computer and laptop</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Email and instant messaging</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Funding</td>
<td>62</td>
<td>12</td>
</tr>
<tr>
<td>For what catalyst of informal learning was the funding designated?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition reimbursement</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Conference attendance</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>Service Type</td>
<td>Count 1</td>
<td>Count 2</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Incentive program</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Literature</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Conducting research</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Subscriptions and memberships</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Technology</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Internet and Intranet</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Job aids and checklists</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Library and literature</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>LMS or online repository</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Virtual space, forum, or social media</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>Phone</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Research tools</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Support staff (for ID/PI practitioners)</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Time for learning and professional development</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Up-to-date and unrestricted technology</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Video conferencing and online meetings</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

| Physical workspace                               | 25      | 15      |

**What does the physical workspace look like?**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Count 1</th>
<th>Count 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees in close proximity</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Low walls</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Open, common, and shared space</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Shared desk</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

**What does the physical workspace allow?**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Count 1</th>
<th>Count 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chatting and interaction</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Collaboration</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Congregation</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Observation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Sharing</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

*NOTE: The total number of respondents for the (a) open-ended item aligned with Research Question 4 was 221 and (b) interviews was 20.*
REFERENCES


NVivo for Mac Qualitative Data Analysis Software; QSR International Pty Ltd. Version 11.1.1, 2015.


BIOGRAPHICAL SKETCH

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PROFESSIONAL PREPARATION

   The Business of Informal Learning: A Survey of Instructional Design and Performance Improvement Practitioners

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MS The Florida State University Art History, 2008

BA The University of North Florida Art History, 2006

Certificates
   Certificate in Human Performance Technology (HPT)
   The Florida State University, 2012

   Certificate in Online Instructional Development (OID)
   The Florida State University, 2011

PROFESSIONAL EXPERIENCE

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June – Aug. 2013 AT&T, Learning Services
   Learning Services Intern

   Teaching Assistant

   Production Intern
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Florida Department of Education: Florida PROMiSE Professional Development Project
Graduate Research Assistant, July – October 2011
Florida Department of Education: Accommodations and Modifications for Students with Disabilities Project
Graduate Research Assistant, May 2010 – August 2012

March 2009 – Feb. 2013  
BOLD Educational Software
Editor

Museum of Arts and Sciences
Curatorial and Education Assistant

Cummer Museum of Art and Gardens
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AWARDS & HONORS

April 2016  
Gagné & Briggs Outstanding Service Award
Educational Psychology & Learning Systems, Instructional Systems & Learning Technologies program, College of Education, Florida State University

April 2015  
Gagné & Briggs Outstanding Doctoral Student Award
Educational Psychology & Learning Systems, Instructional Systems & Learning Technologies program, College of Education, Florida State University

Nov. 2014  
2014 AECT/PacifiCorp Design and Development Competition
AECT Design and Development Division

April 2011  
Gagné & Briggs Outstanding Service Award
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April 2011  
Gagné & Briggs Outstanding Masters Student Award, Finalist
Educational Psychology & Learning Systems, Instructional Systems program, College of Education, Florida State University
PUBLICATIONS


PRESENTATIONS


PRESENTATIONS (continued)

Reiser, R. A., **Moore, A. L.**, Bradley, T. W., & Zhao, W. (November, 2014). *Supporting Faculty Efforts to Obtain Research Funding*. Presidential session delivered at the meeting of the Association for Educational Communications and Technology (AECT), Jacksonville, FL.


SERVICE

March 2015 – Dec. 2015  **The Internet and Higher Education Journal**  
Manuscript reviewer


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Student Engagement Committee Member, Jan. 2015 – Current  
Spring Seminar Series Co-Organizer, Jan. 2015 – June 2016

**Instructional Systems Student Association (ISSA)**  

**Art History Association (AHA)**  
Treasurer, May 2007 – April 2008

**Medieval Studies Student Organization (MSSO)**  
President, Jan. 2007 – Dec. 2007