

**Learning the “Craft of Auditing”:
Partner Perspectives on Apprenticeship and On-the-Job Learning**

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ABSTRACT

The purpose of this exploratory study is to provide descriptive evidence on the importance and pervasiveness of apprenticeship as a model of on-the-job learning (OTJL) in auditing, to investigate changes in its use over time, and to assess factors that promote or hinder auditors’ learning through apprenticeship. To obtain this evidence, we conducted semi-structured interviews with 30 relatively new and more experienced audit partners at one Big 4 firm, seeking their impressions about past and current OTJL practices in public accounting. Our results show that apprenticeship is considered a key component of OTJL, but partners vary in beliefs about the levels in which it is currently practiced. Mapping partner responses to the theoretical model of Cognitive Apprenticeship, we infer that apprenticeship as practiced in auditing may be incomplete, suggesting benefits to learning if additional elements were stressed by firms. We also identify characteristics of auditors and of the professional environment that enhance and/or reduce the effectiveness of OTJL, including technology, time/work demands, feedback practices and reward systems. We identify a number of topics for further research that could extend our findings.

Key Words: Auditing, Apprenticeship, On-the-Job Learning

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I. INTRODUCTION

Today’s auditors require continuous learning to meet demands of the changing regulatory and economic environment. Thus, it is important to study how individual auditors acquire the knowledge needed to understand the “craft of auditing”; i.e., what types of audit procedures to perform, why they are being performed, and when and how to perform them. Anecdotal evidence suggests that in public accounting, much of this knowledge is acquired during engagements, when more experienced auditors explain the specifics of audit tasks and provide later feedback and/or review comments, rather than in formal (classroom) training. This process of knowledge acquisition and guidance by more experienced individuals is generally referred to as the “apprenticeship model” of professional development. Apprenticeship has been practiced throughout history in a variety of fields¹, and recent research considers its role professional knowledge development, such as in medicine (e.g., Stalmeijer et al. 2009).

The purpose of this study is to understand the importance and pervasiveness of apprenticeship as a model of on-the-job learning (OTJL) in auditing, and to investigate factors that promote or hinder learning using this model. While research in other professional contexts examines learning through apprenticeship, research in auditing has not specifically investigated this model. Research on learning in auditing generally uses the experimental paradigm, examining whether auditors’ acquisition or use of knowledge differs based on variation in specific individual characteristics, learning techniques, or environmental factors (for a recent comprehensive review, see Bonner 2008). We adopt a different method, instead investigating the views of audit partners through semi-structured interviews. As such, this paper resembles early research on mentoring in public accounting by Dirsmith and Covalleski (1985), who note that qualitative interview studies are

¹ The earliest research on apprenticeship considers the practices of tailoring and midwifery (Lave 1977; Lave 1997; Lave and Wenger 1991)

appropriate when the researcher wishes to elicit views and experiences of individuals, as a means of exploring topics on which little is known. We solicited the perspectives of audit partners because achievement of partner status indicates that the individual has negotiated the hierarchy through successful learning of professional requirements. Further, due to the many changes in the professional environment over the past decades, we sought a perspective that spans “generations” of practitioners (i.e., some relatively new and some more experienced). We developed specific questions for our interviews based on the academic literatures in auditing, psychology, and education/training relating to professional development, and sought guidance from current practitioners on interview questions. The instrument contains ten questions about the current and past status of OTJL² and apprenticeship in public accounting, and factors that might advance or hinder learning.

This research provides high-level insight into partners’ opinions about past and current on-the-job learning practices in public accounting. Our interviews confirm that most partners believe that an apprenticeship model is currently practiced in public accounting. The majority of partners also recall their own learning in a manner consistent with the apprenticeship model, in terms of receiving formal/informal guidance from a supervisor and/or from observing an auditor(s) in a supervisory role. This suggests that one-on-one interaction in the context of working on engagements is instrumental for auditing professionals to achieve success. To provide a view of the form in which apprenticeship is practiced in the auditing profession, we coded interview data against the methods of the theoretical model of cognitive apprenticeship (CA), which defines steps needed to acquire expertise in performance of knowledge tasks (Collins et al. 1989). This coding reveals that

² We define “on-the job learning” as all ways that auditors learn in their working environment about how to appropriately perform their professional roles. This includes both formal learning practices and opportunities (e.g., classroom training, e-learns, formal supervisory review) and informal learning through discussion with supervisors and peers.

while some steps of the model are well represented, others are infrequently mentioned. This finding suggests the possibility of more directed future research that would investigate whether the phases of the CA model that are under-represented in our data are less practiced today, and if so whether greater focus on them would provide opportunities to improve auditor learning during and following engagements.

We also find that partners identify some factors of people and the environment as enhancing or inhibiting the relative success of OTJL and apprenticeship. Regarding characteristics of learners, interview results show positive views of the capabilities of new hires, with some evidence of concern that new hires may lack commitment to the profession and/or the motivation to engage in a deep level of learning (i.e., understanding the “why” of auditing as opposed to “how” to audit). This lack of motivation may affect whether they continue in public accounting for the long term, or if they do continue, whether they have the ability to effectively train other auditors in the future. Partners also note concern that the complexity of standards and the regulatory environment limit the ability of supervisors to provide adequate coaching to subordinates.

Partner responses also suggest that some environmental factors are considered positive in promoting OTJL (e.g., supervisory practices), some are predominately negative (time/work demands), while others have mixed effects (IT, feedback practices, diversity, reward systems). Our results also highlight that in most cases, new and experienced partners shared similar beliefs about OTJL and apprenticeship, but there are a few notable differences. Relative to experienced partners, newer partners are more likely to emphasize factors such as the firm’s emphasis on coaching, timeliness of feedback, the work ethic of new staff, the flexibility and influence of IT on coaching, the link between rewards and OTJL, and diversity of individuals on engagements. Relative to new partners, experienced partners are more likely to recall that they learned the craft of auditing through personal initiative.

This exploratory study contributes to both audit research and audit practice. While the apprenticeship model has been applied in other professional contexts, there are features of the auditing environment that differentiate it from other professional service firms such as engineering and law (e.g., the nature of knowledge deployed, geographical jurisdiction, frequency of face-to face interaction with clients, and extent to which the client can control/influence the service provided) (Malhorta and Morris 2009). Thus, our results provide new insights on professional development in large professional service firms. Our descriptive findings of current and past audit practices can be used as a baseline of information for academics on factors that promote or hinder an apprenticeship model of professional development. Our results should be of practical use to individual auditors and to professional services firms, in providing information about how firms and individual partners can improve learning at work through apprenticeship (e.g., increase face-to-face interactions, emphasize coaching, encourage the delivery of candid feedback). If auditors at all levels of the organization receive more focused on the job training, they may experience more meaningful careers, leading to improvements in job satisfaction, retention, and performance.

This paper is organized into four remaining sections. Section II reviews the theoretical concepts of apprenticeship, mentoring, and knowledge sharing across psychology, education, and accounting literatures. Section III describes our research methods while Section IV contains results of our qualitative analysis. In Section V, we discuss the study's limitations and develop questions for future research.

PROFESSIONAL CONTEXT AND THEORETICAL FOUNDATION

Performing an effective and efficient audit is a complex task, requiring knowledge and skills that are developed through years of professional experience. In order to guide new professionals in learning how to audit, firms should develop practices and processes that promote knowledge transfer from more experienced professionals. For instance, the 2010 Transparency Report of

Deloitte LLP indicates that professional development and education is one of the top priorities at the firm. “All professionals, especially partners and senior managers, are encouraged to ‘live in the field,’ so they are available to interact with, train and coach the professional staff. This creates a culture of continuous learning and development and provides our professionals the support and supervision needed to achieve audit quality and to advance in their careers” (Deloitte 2010, 20). This description of Deloitte’s practices emphasizes OTJL and is consistent with the apprenticeship model. However, despite the benefits of OTJL and the firms’ stated commitment to promoting professional development, previous research has not addressed the effectiveness of OTJL or apprenticeship in public accounting firms. Thus, it is unclear whether apprenticeship as practiced in public accounting is consistent with models in the education and training literatures, and whether apprenticeship as practiced has been effective.

Relevant Theory in Cognitive Science and Auditing

To inform this study of OTJL models and practices, we reviewed the theoretical concepts of apprenticeship (traditional and cognitive), knowledge sharing, and mentoring, across the psychology, education, and auditing/accounting literatures. In the next paragraphs, we define each theoretical concept and briefly discuss overlap among them.

Traditional Apprenticeship

The basic notion of apprenticeship is that an experienced master shows apprentices how to perform a task and then guides them in performing it, with the goal of transferring “complex interrelated knowledge” (Lave 1977). In traditional apprenticeship, apprentices inductively learn through a combination of methods including repeated observation, coaching and practice; masters teach through a combination of methods including, modeling, coaching/scaffolding and fading, as defined below (Lave 1977; Collins et al. 1989). It is not uncommon in traditional apprenticeship that an apprentice has multiple masters and that a master has multiple apprentices. An apprentice with

multiple masters learns that there are multiple ways to carry out a task and that there are a variety of approaches towards expertise.

Modeling consists of the master executing a task for the apprentice to observe. This helps the apprentice build a conceptual model of the process required to accomplish the task successfully. *Coaching* involves the master observing and offering guidance as the apprentice attempts to execute the task. A key provision of coaching is support from the master offered in the form of hints/clues, reminders, feedback, and/or demonstrations. *Scaffolding* refers to the support provided to help the apprentice perform the task, which may include the master carrying out parts of the task that the apprentice cannot yet manage. Once the apprentice has a grasp of the task, the master gradually removes support, providing only limited hints or refinements to the apprentice with the intention of the apprentice to perform the task autonomously. This is known as *fading*. The interaction among observation, coaching and increasingly independent practice assists apprentices in developing essential self-monitoring and correction skills. These steps also act to integrate the acquired skills and knowledge into a given task that is necessary toward achieving expert practice (Collins et al. 1989).

Cognitive Apprenticeship

Developed as a framework of instructional design, cognitive apprenticeship incorporates the foundation of apprenticeship and traditional schooling for the teaching and learning of cognitive skills in order to “make thinking visible” (Collins et al. 1991). This concept rests on learning cognitive and meta-cognitive skills and processes through guided experience, requiring the experts to “externalize” or verbalize their cognitive processes to learners, so that learners can understand processes that are typically only carried out internally by experts. Cognitive apprenticeship extends the model of traditional apprenticeship (modeling, coaching and scaffolding/fading) by specifying three additional teaching methods: articulation, reflection, and exploration. *Articulation* is when

learners are required to explain what they are thinking related to their acquired knowledge, problem solving, or reasoning (i.e., critique or monitor someone else and explain why it is good/poor). *Reflection* encourages learners to think about improving their performance by “replaying” and comparing their way of thinking to others on similar tasks. *Articulation* and *reflection* both aim to consciously focus learners on their own problem solving strategies. *Exploration* encourages learners to try out different hypotheses, methods, strategies (Collins 1989) in order to encourage learner autonomy. Through these steps, learners are encouraged to become increasingly skilled and independent in performance of cognitive tasks.

Knowledge Sharing

Knowledge sharing involves disseminating information/knowledge among employees and is the primary source of intangible competitive advantage, economic growth and corporate value for most companies (Vera-Muñoz et al. 2006). In auditing, OTJL and apprenticeship are likely to be a main means of knowledge sharing, contributing to the success of public accounting firms. Waller and Felix (1984) suggest that there are three types of content knowledge that the auditor learns through experience: (1) technical knowledge of Generally Accepted Accounting Principles (GAAP) measurement and disclosure rules; (2) knowledge of professional standards for performing an audit (i.e., Generally Accepted Auditing Standards (GAAS), the firm’s audit methodology, AICPA practice rules); (3) knowledge of the client environment, including: the client’s economic setting, industry, methods of operation, competence and ethics, and accounting systems.

While some knowledge of the first two (GAAP and GAAS) is gained in formal training at the university level and within the firm, all three types of knowledge are transmitted on engagements. Auditors are normally assigned to a variety of client engagements that may vary by industry and level of complexity, as well as in fellow audit team members and other dynamics. Audit team members routinely share their knowledge of accounting, auditing, regulatory, and industry

issues that may impact the planning and execution of the audit. “The ability of [CPA] firms to leverage the skills, knowledge, and best practices of their professional staff, to capture knowledge for reuse, and to minimize information overload will determine the quality, effectiveness, and efficiency of their audit and attestation services.” (Vera-Muñoz et al. 2006, 134).

Mentoring

Several studies have examined the related practice of mentoring in public accounting firms (e.g., Viator 1999; Scandura and Viator 1994; Viator and Scandura 1991; Dirsmith and Covaleski 1985), and it is important to differentiate this concept from apprenticeship. A mentoring relationship is similar to that of a master-apprentice relationship in that a more experienced individual (mentor) advises, counsels, and enhances the career development of a less experienced colleague (protégé) (Kram 1983; Hunt and Michael 1983). Due to their surface similarity, the terms *mentoring* and *apprenticeship* are often used interchangeably by audit practitioners. One reason for this may be that formal firm initiatives are “labeled” using terminology that may not be consistent with academic literature. However, when juxtaposed theoretically, mentoring and apprenticeship have similarities and differences. Both concepts involve knowledge sharing from the more experienced individual to the less experienced individual; however, the knowledge objectives for and the functional role of the expert are characterized differently. Apprenticeship is characterized by a skilled expert helping a learner acquire skills and knowledge to perform a task within an “authentic culture of practice” (Billett 1994). In contrast, mentoring is focused on the protégé’s career promotion within their organization (Olian et al. 1988). Dirsmith and Covaleski (1985) suggest that the primary purpose of mentoring in public accounting is career advancement at the partner-manager level. In contrast, they assert that the primary purpose of a guide-protégé relationship in auditing (essentially the apprenticeship model) is directed towards audit tasks occurring at the senior-staff level.

METHOD

Participants

To investigate the on-the-job learning and apprenticeship as a model of OTJL in auditing, we conducted individual interviews with 30 practicing audit partners from one Big 4 accounting firm.³ As shown in Table 1, participants comprise 14 experienced partners (with a mean of 32.9 years of audit experience) and 16 new partners (mean of 15.4 years). Experienced partners were admitted to the partnership between 1983 and 1993, and the new partners between 2005 and 2008. While 93 percent of experienced partners are male, 56 percent of new partners are female. The participants represent a range of geographical locations and industry specializations. Obtaining the perspective of audit partners for this study is valuable for three reasons. First, due to their longevity with the firm, partners have the most informed perspective on characteristics required for professional success within the firm. Second, partners have had opportunities over the course of their career to experience apprenticeship from both perspectives (coach and learner) and at several professional levels. Third, engagement partners set the “tone at the top” for each audit engagement, and their values regarding apprenticeship learning and mentoring will be expected to filter down through the other levels of employees within the firm. Gaining the perspectives of both newly minted and more experienced partners provided a variety of generational experiences, enabling a view of professional practice that spans several decades.

INSERT TABLE 1 HERE

Development of the Instrument and Procedures for Data Collection and Analysis

We selected a qualitative, semi-structured interview approach because this method is commonly used and advocated during the exploratory phases of research (Miles and Huberman

³ A National Director at one Big 4 Firm selected the participants based on the research team’s criteria (diversity in levels of experience, gender, current office location, starting office location/country, starting “legacy firm” prior to merger(s), and industry group), and the partners’ ability and willingness to participate within the study’s time frame. We stratify our analysis by length of partner experience in order to facilitate comparisons between new and experienced partner perspectives.

1994). The advantages⁴ of using a qualitative, semi-structured interview method lie in its “inherent flexibility” (data collection/methods can be varied as the study proceeds) and in the richness of detailed, descriptive information, with strong ability to reveal complexities (Miles and Huberman 1994, 10) that is less likely to be captured via quantitative methods.

Pilot Test and Revision of the Instrument

We first developed a trial version of the instrument based on the prior literature and insights from audit practice described in the previous section. We then piloted the instrument with a retired partner from a large audit firm and subsequently modified our interview questions for completeness and clarity.⁵ The post-pilot instrument consists of ten semi-structured interview questions (with some questions containing multiple parts) about the current and past status of on-the-job and apprenticeship in public accounting, and factors that advance or hinder learning in this environment. The final version of the instrument is provided in Appendix A.⁶

It is important to note that our semi-structured instrument evolved over the series of interviews (see also Hirst and Koonce 1995). After each series of interviews (approximately every three interviews) we reviewed and re-evaluated our questions. Our re-evaluation process led us to

⁴ There are also limitations to qualitative research. Radcliffe (2010) outlines the topical limitations of qualitative research in auditing (treatment of qualitative data, matters of interpretation and technique, and understanding the narrative) and offers ways in which qualitative researchers can address these limitations. In the following paragraphs we address Radcliffe’s concerns in conjunction with the development of the instrument and the data collection process.

⁵ As a result of pilot testing, we made several changes to the instrument. First, in the pilot version, we did not define the terms “on-the-job learning” and “apprenticeship”, in order to elicit the pilot partner’s definition. Because the pilot partner defined on-the-job learning solely as formal training mechanisms (i.e., classroom training), we revised the instrument to specifically note that our research concerns all forms of OTJL, both formal and informal. Second, the pilot instrument asked the effectiveness of OTJL. The response of the pilot partner led us to believe that participants might avoid saying that their Firm’s procedures are ineffective. Thus, we revised the instrument to ask “what could be done better” as opposed to “what is not working.” Third, the pilot version included an open-ended request for factors impacting OTJL. Because few factors were elicited, we revised the instrument to provide participants with a list of organizational factors to consider, and to solicit their opinions of each factor.

⁶ We asked questions about OTJL in general and apprenticeship in particular. Because over 90 percent of participants believe that apprenticeship is commonly practiced in auditing firms as a means of OTJL, and there were few differences in responses between questions addressing apprenticeship and OTJL, we combine these responses for analysis. Our instrument also contains more questions than are addressed in this paper. We chose to focus on those that are most interesting in the insights they provide.

add additional sub-questions to our instrument, which addressed common topics that arose during the interviews.

Data Collection

All interviews took place during the period of September 2008 through January 2009. About a week before each interview, we sent the partner a personal e-mail confirming the date and time of their scheduled one-hour interview. This e-mail contained an attachment including one page containing consent and demographics, one page containing the researcher bios, and two pages listing organizational factors that the partner would refer to during interview. The interviews were semi-structured in nature. That is, if the interviewee response was interesting and relevant, we pursued this topic further before returning to our planned questions, even if it meant that a partner might not respond to all planned questions due to time constraints.

Each interview lasted approximately one hour and was conducted by phone or in person, with two researchers participating in all but one interview. All interviewees gave consent to be recorded by the interviewers. One researcher acted as the primary interviewer, while the other researcher took notes to ensure retention of data in case of poor audio recording/quality or recording failure. We first established rapport with the partners by discussing the general purpose of our research and our prior experiences as auditors. We reiterated that all responses are confidential. Most partners provided client-specific and personal examples that were both positive and negative in nature, leading us to believe that their responses were generally candid. For the few partners whose responses seemed more “politically correct” (i.e., seemed to be reciting formal firm policy), we asked more probing follow-up questions in an attempt to elicit more candid responses. We hired professional transcribers to convert the recordings into text.⁷ During the data consolidation process, we reviewed transcripts for accuracy, noting only minor accounting terminology errors.

⁷ Both transcribers were paid a fee per transcript and both signed confidentiality agreements.

Data Analysis

Each of the three researchers was allocated ten of the 30 transcripts to summarize responses and highlight quotes on a per question basis. To develop the coding scheme, two researchers independently developed categorizations of responses for five questions (sub-questions). They then compared and refined categories. After agreeing on categories, two researchers independently coded the selected questions, with 90 percent inter-coder agreement. To resolve the few disagreements, the researchers referred back to the original transcript for clarification or support. The remaining questions were coded by one of two researchers and reviewed by the other two researchers. After all transcripts were coded and reviewed, we developed counts of responses on a per question basis. Using the final coding scheme, we uploaded all transcripts into NVivo software for our analysis. We report counts of responses in Appendix B. However, the value of the structured interview approach is that partners' perceptions are revealed by the detail they provide in support of their responses. To select the quotes included in the paper, each researcher identified quotations within a particular code based on the representativeness and/or poignancy of the comment. The final selected quotes were reviewed and approved by the other researchers.

RESULTS

The Model: Apprenticeship and On-The Job Learning in Audit Practice

Our investigation first focuses on apprenticeship as a theoretically-based model of on-the-job learning in audit practice. While little research specifically addresses apprenticeship as a learning model in auditing, Dirsmith and Covalski (1985), in an interview study conducted three decades ago, report that the formal audit program instructs the auditor *what* to do. However, they note that the *how* and *why* of audit tasks are primarily learned in a dyad in which a more experienced guide instructs a less experienced learner. The guide also instructs the learner as to the relative importance of particular work steps, teaches the informal mental processes (not just the “black and white”), and

other “soft skills” that cannot be detailed in the audit program. To investigate the current status of apprenticeship model, we asked partners to what extent on-the-job learning in public accounting takes place today through an apprenticeship model. Virtually all these partners believe that the apprenticeship model is practiced at least “somewhat”, and about two-thirds believe that it is pervasive in public accounting today. One experienced partner responds as follows:

“Classroom training has been good in that it has made you aware of things and it has given you understanding and knowledge but the real, the real full benefit I think comes from that one-on-one guidance you get from people who have been doing it and know how to do it and can point out what you are doing right and what you are doing wrong and how to do it better.”

We also asked at what professional levels participating partners believe the apprenticeship model represents OTJL in audit practice. This question was generated from results of Dirsmith and Covaleski (1985), who indicate that the guide-learner dyad supports learning the craft of auditing at the lower levels (seniors, staff), while mentoring supports the business of auditing at the higher levels (partner, manager). While there is general agreement among our respondents as to the applicability of the apprenticeship model, partners vary in the views regarding the levels at which it takes place. About half believe that apprenticeship takes place within all levels of the firm, but some believe that apprenticeship is only practiced with auditors below manager level (i.e., between seniors and staff), while others believe that it is only relevant above manager level (i.e., between partners and managers).

Changes Over Time

Dirsmith and Covaleski (1985) note that the concept of a “technical apprenticeship” in auditing seemed to dissipate in the late 1970’s due to increased competition among the then-Big 8 firms, with the focus instead gravitating toward career mentoring. Subsequent to the Dirsmith and Covaleski study (1985), there have been numerous changes in the practice environment, including increased litigation pressure, greater concentration among large firms through mergers, time

constraints due to increased audit testing after the passage of the Sarbanes-Oxley Act of 2002 (SOX), etc. Any of these environmental changes could affect the role of apprenticeship in OTJL. To investigate changes in learning practices over time, we asked partners about the key similarities and differences in OTJL from the start of their careers (ten to 30 years ago) to the present day. The majority of partners indicate that the most apparent similarity is related to the *use* and *quality* of coaching as a mechanism for OTJL, consistent with the apprenticeship model. However, some partners cite differences over time in *firm or individual emphasis* on coaching that have led to unintended consequences. These viewpoints are exemplified by two partners as follows:

“I think what hasn’t changed... is the whole concept of coaching and working as a team and people trying to work together to get to the common goal and achieve the same goal. In your first year and as you grow with the Firm; there is always someone there to help you as you are learning. There is always that coach, that mentor on the team to help you understand areas that you are not familiar with. That certainly is one area that hasn’t changed from 18 years ago to today.”

“One of the key differences is that I think we spend more time coaching staff... If someone has held your hand all along, you are not going to be thinking, you don’t develop that thought process of ‘okay that didn’t work’ so that is my impression... But I do worry about that learning style of holding hands.”

Partners also describe additional differences in OTJL over time. A majority of partners interviewed note use of information technology (IT) as an important difference over time (we provide further discussion of specific perceived costs/benefits of IT in a later section of the paper), for example:

“The biggest difference is, to me, the impact of technology, ... basic computers and spreadsheets and things that are done that way, versus the old 16 and 32 and 64 column paper and the way you had to go about doing that, which impacted the amount of time, where you spent your time and, in a big way, the documentation and review of that documentation in the process.”

Other partners report that a key difference is the increased partner/manger involvement caused by greater environmental risk and accounting regulation complexities. One (experienced) partner illustrates this point:

“The amount of time that senior level engagement team members spend on each and every engagement is much more than you would have seen in the past. Now I do remember growing up... the partner never came out on the job...they stayed in their office, I don’t know what they did. I am sure they reviewed stuff but they never came out on the job and I think now and there are a couple of reasons, one I think because it is so complicated that partners need to be out there and two I think there is a lot more at stake now. Now we have the PCAOB [...and] the quality program within our firm is very intense. In fact, in some situations when you get bad quality results during a yearly review, you know, you can lose [partner] shares.”

While it is evident that many partners believe that OTJL has changed over time, our results do not generally imply that these differences would result in OTJL quality being markedly improved or diminished. One exception is participants’ views of changes in formal training that takes place prior to engagement-based apprenticeship, which provides a basis of knowledge on which the one-on-one interaction in engagement teams will build. About half of the partners specifically note that there have been changes in classroom training; i.e., that formal training is significantly shorter, contains less technical information and places more emphasis on “soft skills.” One experienced partner compares new hire formal training (“audit entry”) to military boot camp:

“Not only is [formal training] fundamentally different, but here’s the best way to view by analogy. Take the marines when you go to boot camp. The marines would never let someone come out of boot camp who was not ready to be a marine. The accounting firms have no problem letting individuals come out of audit entry who are not equipped to be a marine and so if you go to your audit entry---when I did audit entry, first of all it was three weeks. Secondly it was individual, it was not group; by that I mean we didn’t work in table groups and sit down. The way it worked it was just like being on a job. You had a hypothetical company. You did hypothetical work in cash and receivables---in other words the areas that you were going to be working in and you were taught by a manager and senior and your work papers were reviewed after you did your audit section just like you are going to do on the job by yourself and then you got review notes and then when you finished you received an evaluation and you either passed or you failed, and if you failed you got fired... Today, nobody gets an evaluation on audit entry [training], they work in table groups. So we had a working session [within the audit team] to try to talk about this and I asked a question ‘When you did audit entry did you do table groups?’ and she said, ‘Yes. I said. ‘Okay. So how long was audit entry for you? Three to Five days?’ Then I asked, ‘How many in your table group showed up late? How many in your table group didn’t do any work because they were hung-over?’ She said, ‘Most of the group.’ So there you have it. The root cause of all of this, I don’t think, this has ever been addressed by the accounting firms. You have to start at audit entry and you have to start by training people properly teaching them...that’s what on-the-job training is all about; it’s about reinforcing and then teaching, but you need to teach people how to do the basics, you need to teach people how to problem solve. There’s a

whole bunch of things that need to be taught in audit entry and it's not about three to five days at Disneyland.”

These comments on formal training at the entry level have implications for later apprenticeship-based learning within engagements. The formerly used training method that the partner describes is basically a mock engagement, which should mimic the apprenticeship model to which the associates will shortly be exposed. This partner's comments imply that new associates are no longer exposed in early training to practice in how they will relate to seniors in the actual client engagement environment on the job. This implies not only that associates have one less chance to be coached, but also that the burden on engagement seniors is greater because associates are less prepared for their first few engagements.

Partners' Key Learning Experiences and the CA Model

The CA model, previously discussed, poses that successful learning of professional skills involves a number of steps performed by guides and learners. Partners participating in our study comprise a sample of individuals who have successfully navigated many hurdles on the way to reaching the top of a very hierarchical organization. Their experiences provide insight into how successful auditors learn, and form a baseline for comparisons across time. We asked partners to recall how they learned the craft of auditing, and solicited their most memorable experiences in learning. Most partners indicate that they learned through receiving both formal and informal guidance from other individuals:

“What I do is a compilation of the things that I picked up from all the people that I worked with throughout my career. Then eventually you develop your own style... Did I learn things out of the classroom? Sure, but the majority of what I learned was working with other people.”

About half of the partners specifically note learning through personal initiative (i.e., asking questions, minimal/no guidance, trial & error). One partner said he learned by:

“...getting out there and auditing the hell out of places. ... It was by being inside the audits, by having someone sit down and saying, ‘Here are your tasks, here's what you are expected

to do and why.’ And asking a lot of questions and having the iterative process of supervision, feedback, re-work, review notes, re-work, etc. with the next level up.”

Another partner commented on the value of making mistakes:

“I haven’t had too many of them but you learn a lot from the errors and mistakes and ‘audit failures’ I think learning from mistakes is a powerful, powerful learning tool.”

About half of the partners also note the importance of learning through observing the behavior of others, in some cases “picking and choosing” from favorable and unfavorable qualities of their role models.

“A lot of us kind of hitch our wagon to somebody and say, “That’s who I want to be like, that person seems to be doing well. I think I will try to pick up as many characteristics from them as I can.”

“What I did was I found someone who was comfortable---who I was comfortable with, who was brighter than I, (who) had been around longer -- and I would go to that person when I had questions and ask the questions and that’s how I would learn.”

“A role model is somebody you look at and you say, boy this person ... is really good at this. Boy I am just going to copy that behavior and emulate that behavior. Or, it could be, ‘God, ... is terrible at doing this. I am never going to do that.’ So that is the role model, positively and negatively.”

Others report that being “challenged” in their career lead to meaningful learning experiences.

“What I think made me the successful person that I am today is the really tough, challenging engagements. Either in terms of the client or the myriad of accounting or auditing issues, or the pressure and the tension of the deadline. I think that is what really teaches you about the trade or craft ... the really tough situation or the tough environment.”

“By the way, when I picked the people it wouldn’t be the people that were the nicest. It was the people that I thought knew the most and the more pain I had in learning, the more I thought I was learning. The harder the person was to work for the more I wanted to work for them.”

One partner recounts a situation experienced as a manager, in which he was thrown into a challenging situation by a partner:

“*[The partner said]* ‘We’re going to take this other guy off - they love him. We’re going to put you in that position. Now go do it.’ He didn’t say, ‘I’m going to hold your hand and bring you out there.’ He said, ‘The CFO is not happy about the change, but we’re going to get

through it and this is going to be good.' Was I uneasy about that? Yes ... (1) my experience with the client; (2) knowing they didn't want me on the job; (3) if I screw this up, we lose a client and I will probably never get admitted either. Right? It was a challenge! It all worked out, but I think there's a fine balance and I think people need you to realize that your learning isn't always that someone is going to sit you down and walk you through it. It's going to be a lot of interactions that you get and you multiply that by hundreds and hundreds, so you're going to know, when you get into a hard situation, you're going to know how to deal with it."

Some partners also explicitly discuss learning through feedback and review notes. One partner explicitly noted that guidance from the review process as follows:

"Getting review notes on what I did constantly, so this constant feedback every time you do something, ... someone is looking over your shoulder and saying you did those four things wrong and you did these three things right."

The partners' responses of their most memorable experiences in learning the craft of auditing can be mapped into the CA framework. Table 2 provides some statistics on how the CA stages are represented in the partners' comments. Fifty-three percent of partners recalled learning the craft of auditing by observing an auditor in a superior role; i.e., the modeling(observation) phase of CA. Sixty-three percent recall having a supervisor explain (or repeatedly explain) how and why a task is to be performed, consistent with the phases of observation and coaching. Fewer partners (13 percent) recounted examples consistent with scaffolding and fading. The same number recounted receiving feedback from a supervisor and subsequently re-working their assigned tasks. Re-working a task relative to expert feedback is both a component of scaffolding/fading (provision of feedback) and reflection (re-working). Only seven percent of partners suggested participating in articulation, in the form of supervisory review by face-to-face interview and only one partner cited exploration as part of his early learning in public accounting.

These results suggest that some steps in the CA model may be under-represented in audit practice, at least at the time that our participants "learned the craft". While recognizing that partners' responses do not reflect all of their collective experiences, these results suggest that there may be opportunities to improve OTJL in public accounting by providing specific focus on the later stages

of the model, including face-to-face feedback, articulation, and exploration. Further research could explore presentation of specific CA model steps in OTJL among less senior auditors, to obtain a more current view. Further research could also examine whether specific CA model steps such as reflection make a difference in learning, within the audit environment.

INSERT TABLE 2 HERE

The People: Characteristics of Auditors and OTJL Effectiveness

In order for OTJL to be effective, there must be willing and competent guides, as well as receptive learners who are able to understand what is being taught and apply it to practical situations. Dirsmith and Covaleski (1985) suggest that the primary purpose of a guide-learner relationship in auditing is directed towards audit tasks occurring at the senior-staff level. In Bonner's (2008) comprehensive review of judgment and decision making in accounting, she indicates that individuals will vary with respect to a variety of personal characteristics (i.e., ability, intrinsic motivation, affect, confidence); all of which ultimately impact an individual's judgment and decision quality. Thus, we asked partners to note their impressions of new staff (learners) and seniors (guides) in the current practice environment and also whether these impressions have changed over the course of their experience.

Many partners respond with both positive and negative comments with respect to new staff. Most have positive views about staff *ability*, specifically indicating that audit staff today are IT-oriented, intelligent/well qualified, and better prepared for work. Staff orientation towards IT may indicate that the information search capabilities of staff are better; as one partner suggests, "their knowledge of technology and the ways to use it, is very impressive to me." However, several partners indicate that some staff may be unwilling use their ability to engage in more time-intensive research. Several partners imply that the culture of "instant gratification" leads to less patience to *understand*, as suggested by these quotes:

“...of course they understand technology. They have had access to far more technology than people of previous generations have had and they are able to use that and able to get very often instant answers which is both good and bad. I mean, whether they are quite as willing to do painstaking research as others used to do because they are so frequently able to get an instant answer that might be a point.”

"What seems to be missing in people, I think, is the curiosity about why. There is too much emphasis on, 'how do I do it?' Not, 'why do I do it?'...I don't want to say that there are not individuals who still want to learn... 'why' versus 'how', and all that, but there are less of them than there used to be."

“(t)heir work mentality is different. Not that they are not hard workers. They are less willing to put in the time to understand something. There are times where we will be sitting there learning something and if it is too long for them to get it, they get more frustrated.”

With similar conditional praise, about half of partners indicate that staff today are “very bright and eager to learn”; however, they seem less committed to a long term career with the firm. “They all want to learn; they all want to be successful, maybe not at [the firm], but they see [the firm] as a means of helping them learn and improve so that they can go on with any other pursuits that they might want to pursue in the future.” “Are they as willing to learn to sacrifice to do whatever it takes to get the job done? I don't think so.”

Nearly half of partners respond negatively to staff *motivation*, explaining that new staff have a lower “work ethic,” while others also indicate that staff have higher expectations of what the firm should be providing (i.e., training, work-life balance). Decreased intrinsic motivation (e.g., need for advancement) may lead to less than optimal learning and performance on staff level tasks.

“It doesn't seem like they bring the same level of work ethic to the table and I think a lot of that is what I saw, the big shift... go back to the internet boom...if you had to wear anything but jeans to work that wasn't a good thing to have on the job description and you don't give out free coffee and lattes? I think we do so many more great things from a benefits perspective today. We're kinder and gentler and want to make sure everyone feels good about things and I think, to some extent, it's taken for granted a little bit because sometimes you just want to say, 'Listen, that's why it's called work for a reason, that's why we pay you, now go do it.' That doesn't go over well [with new staff].”

This finding is consistent with recent reports on the state of the accounting profession. For example, in a study of “accounting talent” (corporate finance professionals with ten or more years of

experience), Grant Thornton (2010) similarly reports that seasoned accounting professionals in industry are also concerned with workload and lifestyle, contributing to corporations' inability to attract and retain quality accounting personnel. This report further suggests: "... individuals choosing a career in finance and accounting today are aware of the work-life balance issues associated with such roles. However, the past decade has witnessed significant changes in the responsibilities and workload associated with these jobs changes which may drive existing talent away from this career path." (Grant Thornton 2010, 7) This sentiment by more seasoned professionals in industry is consistent with what new graduates experience in public accounting. Lower commitments to the accounting profession may have negative consequences for the future of auditing firms if it results in less interest in developing a deep understanding of audit issues, and less interest in coaching and developing others.

With respect to audit seniors, a majority of partners indicate that continuous change and increased complexity of the accounting standards and regulations has, in fact, changed the role of the senior. Partner focus on this area with respect to developing auditors is not surprising given that standards and regulations are one of the defining characteristics of the accounting environment; and violation of standards and regulations has the potential for serious consequences. Some partners are concerned that because of the increased complexity, audit seniors today are given less technical responsibility on-the-job. They spend more time in an administrative capacity, and thus do not have sufficient opportunity to develop technical audit maturity. The relationship between increased complexity and changing role of the senior is depicted among the following partner viewpoints:

"At some point it's just like 'I just learned this stuff and it's changing again.' Changing, constant changing."

"I mean [accounting standards are] so complex that there are many partners that don't understand... It wasn't like that years ago. I don't believe when I was a senior that there was an accounting pronouncement that I couldn't comprehend."

“Well [seniors] have a harder job now... More complicated world. More GAAP to know. More technology. Certainly I would put a senior today up against a senior from 20 years ago.”

Some partners explicitly state that seniors have less exposure to technical accounting because the more complex work is being performed more often and the higher levels (manager, senior manager).

“I think the complexity of technical issues has [changed the role of the senior] because I don’t see those issues getting down to the senior levels as much as they have been in the past. The complex issues are more so handled by the managers and the partners. And I think the issues are more complex today than they had been previously.”

“The accounting rules are very complicated. [Regulators] come out with some [rules] that you wonder sometimes, ‘who thought this up?’ I can’t, as somebody who is a partner - I read [the rule and think] ‘this isn’t English’ – let alone my senior who has got three or four years experience is going to understand how to apply this [rule] or be able to identify that this [rule] is something that could be applicable [to a client]. It is very complicated, which is why partners and managers are more on-the-job than I think they were [in the past] because there is more complexity that needs to be dealt with.”

One likely reason the shift of work has occurred is to reduce potential risk exposures. Thus, increased partner/manager involvement is not surprising, given that the primary risk of loss lies at the partner level. Those (partners) who violate standards or regulations may lose their job and/or license to audit public clients or may be subject to fines or jail time (Bonner 2008). In their study of more seasoned accounting professionals, Grant Thornton (2010) also note a similar concern regarding accountants in industry, with CFOs expressing concern with their staffs’ inability to understand and apply increasingly complex accounting standards.

The Environment: Organizational Factors Enhancing/Inhibiting OTJL Effectiveness

In order for OTJL to be effective, there must also be an environment conducive to learning. We next investigate organizational factors that might hinder or promote OTJL (and apprenticeship) in public accounting firms. While these factors are not unique to accounting settings, understanding their impact with respect to OTJL is important. To accomplish this goal, we sought possible factors

influencing this practice from several sources, including the academic literature, opinions from two senior level practitioners from Big 4 firms, our own prior experiences from years as practicing auditors, and our current experiences in training entry-level auditors in university and firm training settings. Thus, some of our questions are grounded in prior literature, while other questions are more of an exploratory nature.⁸ In the following paragraphs, we present prior literature and anecdotal evidence from audit practice supporting inclusion of the specific organization factors considered in the study. For each organizational factor, we report partners' beliefs regarding how the factor impacts OTJL. In most cases, we were able to classify their responses as positive, negative, or neutral (i.e., no net impact on OTJL).

Factor 1: Information Technology.

One pervasive factor likely to affect OTJL in general, and apprenticeship in particular, is the increasing use of IT in professional practice. IT is likely to impact learning in two ways. First, on a general level, technology has dramatically altered the way individuals communicate with one another. Standard communication technologies such as e-mail, teleconferencing, and instant messaging have become ubiquitous in audit practice as in other business environments. These standard communication technologies have enabled more flexibility and timeliness of communication, often at the cost of interpersonal contact and development of social relationships (Middleton and Cukier 2006). Not only does IT reduce within-team face-to-face communication, Markus (1994)⁹ suggests that users select IT deliberately when they wish to avoid interacting with others. We would expect that the availability of numerous communication devices such as cell phones and smartphones (i.e.,

⁸ In their review of knowledge sharing within public accounting firms, Vera-Muñoz et al. (2006) systematically examine the effects that information technology, interactions among auditors, and reward systems have on encouraging or hindering auditor knowledge sharing. Their analysis was influential in identifying organizational factors considered in this study.

⁹ Prior literature across business disciplines regarding the effects of electronic communication in the work environment is widely researched (e.g., Culnan and Markus 1987, Markus 1994). A comprehensive review of this literature lies outside the scope of this paper; therefore we present audit partner perspectives, with respect to the effects of IT on learning on-the-job in auditing, which are consistent with findings revealed in previous studies.

iPhone and Blackberry-type devices) and the habits individuals develop related to these devices (such as texting rather than calling, e-mailing rather than stopping by) to impact auditors' interpersonal communication skills, which would therefore have an impact on OTJL.

The second way in which technology is expected to impact OTJL is through the provision of IT resources provided by auditing firms. The large audit firms have developed and maintained technologies that provide a platform for audit workpapers (Winograd et al. 2000; Bierstaker et al. 2001; Bedard et al. 2007; Dowling 2009), whereby both the gathering of audit evidence and audit review are often executed without face-to face interaction. Large audit firms have also developed knowledge management systems (Morris and Empson 1998; Vera Muñoz et al. 2006) to facilitate professionals' access to internal and external expertise, and provide a timely repository of best practices. Some firms have also implemented technological solutions in support of specific phases of the audit such as client acceptance (e.g., Winograd et al. 2000; Bell et al. 2002) and risk assessment (e.g., Shelton et al. 2001). While the literature notes benefits to IT applications in auditing, some reservations have been noted. Vera Muñoz et al. (2006) suggest that IT improvements may lead to information overload and disguise the gap between methodology and actual work practices. Further, automation often makes processes and tasks invisible ("black box") to users, which prior research notes can inhibit learning (Billett 1994). For example, in the specific context of auditing, studies find that the quality of judgments of both workpaper preparers and reviewers is lower when using electronic systems than with face-to-face review, consistent with lower task effort (Brazel et al. 2004; Agoglia et al. (2009). If learning is less effective without close personal contact, then opportunities to train and acculturate newly hired personnel may be missed. Thus, related literature to date suggests both benefits and costs of IT in audit practice. Our focus is particularly on how IT influences opportunities for professionals to learn on the job in their day-to-day working environment.

We asked participating partners how IT affects on-the-job learning. On the positive side, partners cite numerous benefits of IT. They note that technology improves the quality of available information on several dimensions, including: (1) breadth (“the ability to broadly find a lot of information that helps to ‘educate’ you in a lot of different topics”; “staff have such a wide range of resources at their fingertips”; “virtually all our internal guidance as well as nearly every piece of professional guidance available to us online”, “it makes a lot of the stuff richer”); (2) depth (“you get the information you need ... very specifically”, “ability to provide spot-on information for somebody who’s in the process of trying to learn”); (3) consistency (“the organization of the working papers and the ... consistency that generates”; and (4) dependability (“we can rely a lot more on [audit] system(s) today than we could ten years ago”).

Many partners also mention the speed with which information can be accessed and processed. “It is real time. It’s right there ... ever present.” “IT is extraordinarily important... the speed with which we can get an answer is vastly improved because of the quality of the IT support that we have.” Further, a number of partners note the benefits to efficiency enabled by flexibility of access, as communication is released from the bounds of time and space:

“...before, when you had a big issue, you had to run up to [the firm’s headquarters] to talk to someone. Now we get on a conference call ... five people can sit in a room for an hour and listen.”

Some partners specifically mention benefits of the firm’s “e-learning” tool, including both consistency of training (“in theory at least, [you] have a more consistent standard of the education when you do it through e-learning because it is not so dependent on the quality of the individual instructor”) as well as efficiency (“overall it has been beneficial in terms of getting learning out to a bigger group of people, at a uniform standard, less expensively”).

In addition to more formal training mechanisms, some partners also note the nature of the specific engagement tasks in which IT is valuable. These include development of industry knowledge

(... “data on companies or industry challenges”), researching professional pronouncements (“... those tools are critical to how I stay alert, stay aware”), audit testing (“Now a person can walk in and list out every revenue in excess of a certain amount ... [or] everything that was sold in China”), engagement review and performance feedback, documentation of audit tasks, and storage of workpapers. Particularly relevant to OTJL, some partners referenced the key role of IT in providing information for learning:

“... 20 years ago you couldn’t go to a database and punch into a search engine a topic and find 12 different things on it as opposed to now when you can. So, it is just a different environment and the environment really dictates the types of learning opportunities that are out there.”

“... every consulting memo that anybody writes gets put on some place and we all can look at it.”

Partners also note that IT is particularly helpful in enabling/facilitating interaction of groups of auditors, not only within engagement teams, but also across service lines and geographical regions. Partners noted the value of IT for sharing best practices across the firm:

“... [IT] is overwhelmingly positive in terms of being able to share information very quickly across different lines of service, across different industry groups. We didn’t have that same learning in the past as well as being able to share information across geographies, meaning if there is something to be learned by a client in Boston, e.g., it can quickly be shared with a team in Seattle.”

While partners cite numerous benefits of IT, several drawbacks are also mentioned. Most frequent is the concern that IT reduces human interaction, which has a number of potential consequences for OTJL and audit quality. As auditors focus more on the computer interface (“hide behind their computers”, “stuck to their laptops”), verbal interchange is reduced both between auditors and client personnel, and among engagement team members. Partners express concern that both effects reduce learning opportunities.

The transition of client communication from verbal to electronic is frequently noted as cause for concern. The implication for learning is expressed by one partner as follows:

“I also think you learn by talking to your client. I was shocked one day a number of years ago to find out that the staff was emailing the controller questions. I just never thought of it. Of course you know there was no email when I was doing that stuff and so if you needed information the only way you got it was to talk to them. They knew that too and it was pretty widely accepted that you had an open door you just kind of walked by and if they were there, you would ask them the question. Or in some cases you stored your questions up and you had a certain time every day that you went by and went through these things. I may be wrong but I don’t think you learn as well through electronic communication with your client. You learn through conversation.”

Another partner’s statement draws implications for auditor skepticism:

"The part I don’t like [about IT] is where the staff or senior sits there with an IPod...and they e-mail their questions to the client about what they want or don’t understand and the client e-mails back to them and they are about eight feet away from each other. This face-to-face probing discussion skepticism that needs to be in the auditor's mindset when he or she is conducting the audit, I think you lose a lot of that."

Supporting this concern, another partner notes that valuable information on the client is lost when the auditor cannot “see the person’s reaction and look them in the eye.” Another emphasizes the importance of this issue by noting: “we talk to people about that the whole time so I think that is a really negative impact.” One partner also notes that reliance on electronic communication with the client has another detrimental effect: “you are not building the relationship with the client by sending e-mails”. If so, both audit quality and client retention could be threatened.

Regarding reduction in engagement team interactions in the IT-enabled environment, one noted effect of IT is reduced presence of higher-ranked audit personnel at the client location. “I really remember I was in an audit room one time and I was looking at ten people in the room and no one was talking to each other. I thought maybe we have lost some of this coaching”; “it isn’t as often the case that you are all in the one place for a significant period of time”; “don’t have the physical presence with the team and that takes away from coaching”. In contrast, one partner recalls that in the prior paper-based environment:

“Everything was hard copy and the audit partner basically was there in the field reviewing hard copy and he would give you your 35 pages of review notes on a piece of paper, standing right in front of you and you would need to go through them all and clear them all, with him there and deal with all of that stuff.”

This partner goes on to say that delivering extensive review points in person is “less harsh” and that remote review “at times may not get the message or the learning experience that we wanted”. There are also hints that the nature of the feedback differs in electronic environments: “sometimes when you type that ‘cell I32 does not make sense’, I am not sure that really is good coaching.” This concern about reduced opportunity for observation and feedback extends to the manager level as well:

"I could have a team doing an audit and I could probably do everything from here and never have to go out there to see my client and they'd get no feedback and read on my managers to---are they messy or are they neat? I mean all I see is a database. I have no idea as to “Are you organized or are you not?” I just see a step and it's signed off and as long as what you said in there makes sense. I have no sense as to ...when I see them talking to a client am I comfortable with that?"

Some partners specifically note that this reduction of coaching opportunities in the computer-mediated interface has consequences not only for learning, but for audit quality as well: “a lot of the education is from interacting”; “there is just less of the opportunity for some of that osmosis to happen that used to exist”; “the opportunity for ... the ‘informal question’ or the ‘casual comment’ ... one wouldn’t ask or make if you are reviewing electronically”.

Specifically regarding staff development, some partners expressed concern that excessive reliance on email and instant messaging has reduced communication skills of young auditors:

“...they communicate by basically taking their phone and they text everything and that’s how they communicate in person, that’s how they write. They don’t write, they communicate with three letter things. ... that level of communication and learning how to communicate and write and deliver the tough message? It’s gone.”

Beyond difficulties with client and team interaction, several partners referred to the level of distraction associated with IT in the audit workplace: “our people as a general comment think they can do all of that multitasking and I am not sure we are very good at that.” Other partners express similar concerns with respect to distraction and infringement on-the job:

“A lot of us would blow up [instant messaging] if we could. In some cases we’ve seen it and in other cases we just suspect it - if someone is sitting at the client for eight or nine hours it seems like half of their day was spent on [instant messaging] and was not collaboratively working.”

“As technology and other things have changed over [time]...there is much more fluidity in the audit room, many more distractions, such as e-mail, voice mail messages, cell phones, having to connect to here - to connect to there - to feel we are fully connected the whole time. It creates, in my mind, a very significant disruption set to how the learning process operates.”

While as noted above, the partners recognize and value e-learning opportunities for the flexibility they provide, one partner discussed a downside related to distractions:

“What happens with e-learning is that people don’t learn because what they do is they multi-task and they just do it and kind of flip through it and don’t pay much attention to anything. You have to get the right balance between e-learning and the classroom training.”

In summary, positive perspectives offered by partners on IT relate to efficiencies gained (e.g., accessibility of information, timeliness of information, flexibility, facilitation of training and learning) and negative perspectives offered by partners on IT relate to consequences and changes in organizational relationships (e.g., minimizes human interaction, reduces the ability to coach and provide feedback, and creates distraction).

Factor 2: Supervisory and Feedback Practices.

Vera-Muñoz et al. (2006) note that supervision typically connotes downward communication in the form of advice about task-related matters, such as task instructions, objectives, constructive assessments of preliminary plans and the results of past decisions (see also Hall 1996), and provision of feedback. *Feedback* is information given to an individual after a task has been performed which may help that individual acquire knowledge and lead to improved judgment/decision making quality (Bonner 2008). Supervisory review is required by GAAS, is considered part of the subordinate’s on the job training, and is empirically linked to important factors for job satisfaction, career development and turnover intentions (Vera-Muñoz et al. 2006). Studies examining the work-paper review process also support the importance of supervisory and feedback practices in OTJL (Fargher

et al. 2005; Brazel et al. 2004; Gibbins and Trotman 2002). For example, Gibbins and Trotman (2002) ask managers to identify the qualities of a good reviewer. Respondents praise supervisors who provide clear, complete, and timely feedback and those who provide on-the-job training. Bonner (2008) summarizes current research suggesting positive effects of feedback on judgment/decision making quality, noting that certain dimensions may lessen its positive effect, including lack of timeliness, incomplete feedback, poor quality, and diminished frequency. Thus, we include supervision and feedback among the organizational factors considered in this study.

Although partners were asked to comment on the effects of both supervision and feedback on OTJL, most of the partners interviewed focused their responses on the role of feedback. Of those who commented on supervision of OTJL, most felt that supervision has improved over the years. However, some note that it requires face-to-face interaction to be effective, and there is variability in the quality of supervision. For example:

“The senior will review that person and go through and say, ‘Okay, what did you do here and how did you do it?’ And then they’ll get the review and get an understanding of whether or not the work was done properly and the staff (or whoever it is) will get an understanding of what’s important or why this was done or if it was done incorrectly, how to get it done correctly.”

“I think there is more of a connection to people so I think the supervisory and feedback is more real time because you feel more comfortable with the people and you know them better.”

One partner was critical of the firm’s supervisory practices, noting that some auditors who are placed in a supervisory role do not have adequate supervision themselves, and therefore they aren’t good supervisors:

“I think you have some folks who supervise very well and there are some that do not... remember you went through a long period of time when you didn’t have any supervisory practices and so there are a lot of people that really don’t know how to supervise because they were never supervised.”

The topic of feedback elicited strong reactions by partners, and there was consensus that the timeliness and quality of feedback has a dramatic impact on auditors’ ability to learn. This is not

surprising, since feedback has been identified in the literature as essential to learning in general. As summarized by Bonner (2008), various dimensions of feedback (timeliness, completeness, quality and frequency) can moderate its effectiveness. We organize our analysis of partner responses on these four dimensions. Also, some partners differentiated between *formal feedback*, which occurs as part of the firm's documented semi-annual evaluation process, and *informal feedback*, which is viewed as more immediate, occurring in real time, on-the-job settings.

Overall, the majority of partners have negative views about current feedback practices. With respect to formal feedback, some partners feel that the formal process enables learners to receive more timely feedback than in the past, as indicated by the following examples. "We give more formal feedback more often so I think that plays a very critical role...there is more rigor in the process." "We've got our [evaluation form] and that puts formality into the process and I think we've come a long way on that [process]." "[The firm] has put better controls in place to make sure [formal feedback] happening more timely...good process getting a lot better."

Others discuss the benefits of informal feedback, noting that it tends to be more timely and can be more candid because it is not documented, as is the formal feedback process. The following quote illustrates this point:

"Real time feedback - because you are not writing it down, somebody isn't looking over your shoulder and saying 'what did he mean by this' - You can be a bit more specific. You can maybe be a bit more critical. I think that in the formal written feedback, you worry about every word that goes into the feedback because it is going to be read by somebody who has absolutely no knowledge of the job or the job specifics and they could easily misconstrue what is being said."

The majority of partners were highly critical about the effects of feedback practices on OTJL. Some were concerned that formal feedback was not occurring on a timely basis (despite the improvements over the former process noted above). One experienced and one new partner respond as follows:

“By the time those forms are done, if the person hadn’t gotten that feedback, that open honest feedback while he or she was doing the work, it is almost meaningless...because [the work] is not fresh in anybody’s mind.”

“Unfortunately, we all get so busy and we throw the formal feedback onto the back burner until it’s absolutely due as part of the summary review, and that’s something we are horrible at, and we’ve always been horrible at, and we need to get better at it.”

Other partners felt that because supervisors are reluctant to give negative feedback, both formal and informal feedback processes are ineffective because they are too “soft” to result in learning, as indicated by several partners: “[supervisors are] less willing to be forthright face-to-face with people in terms of what they need to do to improve their performance”; “we have trouble being critical and so we are not critical face-to-face”; “people struggle to give a tough message”; “we tend to shy away from giving people negative feedback verbally.” One experienced partner gives a more curt view:

“Our people do not understand the role of on-the-job training, constructive feedback, which can be negative, by the way. It is not always positive and this becomes a generational issue where everyone wants a trophy.”

Several partners blamed the lack of candor in feedback on the fact that the firm has an upward feedback process, whereby subordinates evaluate their supervisors as part of formal feedback. The feeling is that the supervisors want to get positive comments from the subordinates, so they provide only positive comments when evaluating the subordinates. If there is a failure in learning on the subordinate’s part, some supervisors will take the blame for the lack of learning, sometimes inappropriately. The following powerful quotes sum up this problem:

“What happens is even negative feedback becomes positive feedback. So here’s what happens. Imagine somebody does something and they don’t do it well. Rather than someone saying to the person, ‘You didn’t do this very well and let me tell you what you could’ve done.’ The way it now gets delivered would be, ‘How did I fail you? What did I, as a supervisor, do to not properly supervise you, whereby you were not able to do this to your potential.’ It’s that culture that has become embedded that has made everything ineffective because people will not, or if they do, they get bad upward feedback, which then comes back to them through their compensation, their performance evaluation when, in fact, the person is trying to give somebody on-the-job training.”

“People wanting reassurance and acting perhaps a little irrationally to constructive criticism complicates some of the concepts of an apprenticeship... the expectation should be, perhaps, that you are going to make mistakes and you have got a lot to learn. - I don’t think organizations need to apologize for, in the appropriate manner, pointing that out and bringing a little, dare one say, *humility* to the proceedings sometimes.”

Other partners blame the lack of candor on the fact that the firm, at one time, was afraid to lose employees.

“We were probably afraid that individuals would leave and we really couldn’t afford that 5 years ago. I think that over time, we just really haven’t gotten out of that mentality.”

Because of the lack of candor and reluctance to give negative feedback, employees who are not adequately learning may not realize there is a problem until it is too late.

“There is certainly sometimes a gap between what [a supervisor] will say on a [formal evaluation] about another person and then what they will say when they are talking with their peers or talking with a review committee or something like that...[a supervisor] goes into this evaluation meeting at the end of six month period and they say, ‘Bob is really struggling.’ And [the review committee] says, ‘It’s funny that not one of his personal evaluations mentions that.’”

The following story illustrates when one partner intervened to provide candid feedback to an employee who was struggling:

“I recall early on when I...started working with her and pulled her aside and really said, ‘Your feedback forms haven’t reflected it, but you have this reputation and I can see it myself, that you need to work on these things and do more research and execute more care,’ and I recall her saying to me that she always thought something wasn’t right; she kind of had this feeling, but that nobody said anything and she really appreciated that I gave her the feedback because that gave her some things she knew she was falling behind her peers on and was able to work on.”

Finally, one criticism of the formal feedback process is that evaluation forms do not really measure OTJL. The following quotes illustrate this criticism. “I think our formal feedback is a bunch of stuff that really isn’t grounded in reality of what we do for a living.” “Some of the hand written, more free-form evaluations I received years ago were probably more effective than some of the 17 boxes and the ways some of them are structured now by HR professionals and consultants. So I think we can almost over-do it so it becomes less effective.”

Factor 3: Time and Work Demands.

Various forms of time and work demands have been shown to inhibit successful OTJL. Time pressure (e.g., time budgets and deadlines) has been cited as one of the most challenging environmental factors faced by auditors (Bonner 2008). In their 1985 study, Dirsmith and Covaleski note that some seniors report believing that the role of guide is important and they sometimes perform this function; however, they feel that time constraints inhibit effectiveness. Fargher et al. (2005) conclude that the time spent training (auditor) subordinates is lower when time pressure is high. Mentoring studies also show that time constraints (Allen et al. 1997), competition, and stressful environments (Dalton et al. 1997) hinder mentoring relationships. The negative results with respect to time pressure in mentoring are consistent with studies finding negative impacts on decision quality (McDaniel 1990; Choo and Firth 1998).¹⁰ Based on the cited literature and concern from audit practice, we also include time and work demands in the set of factors we consider.

Consistent with the above cited literature, the majority of partners feel that time and work demands have a negative impact on OTJL. Specifically, most felt that budget pressures create an environment where supervisors feel there just isn't time to be a proper coach. The following partners capture this sentiment:

“When we hear about why people aren't coaches, the biggest reason is time commitments and time constraints or budgetary constraints or things like that.”

“I think that if you talk to seniors and managers they would say they would love to train their apprentice – they would love to take someone under their wing, but they just don't have the time.”

“Maybe at times people are hard pressed for spending an extra half hour or whatever explaining to somebody why what they are doing isn't quite right.”

One partner noted that in high time pressure situations, the review process suffers:

¹⁰ Also, one practitioner with whom we spoke in developing our instrument said that given demands on partners' time in the current audit environment, he wondered if they have sufficient time to develop the staff below them.

“What happens is when you get busy you start reviewing by review notes as opposed to in advance, talking with people and explaining what they’re supposed to do and that type of thing.”

Other comments describing the negative impact of time and work demands reflect more of a trade-off between competing factors, such as work-life balance or juggling different tasks. Such comments indicate that coaching is often not given priority over other competing demands on time, as captured by the following quotes:

“You are trying to get things done as efficiently as you can and you are working long hours and you have work-life strains you are trying to balance and it’s easy to let the on-the-job training go and not focus on that when you are trying to get something done yourself.”

“The times where I have a balanced work schedule, I really can devote the right time to my people and you could see the people grow and it really makes a huge impact and then the times where I am put on too many jobs or initial public offerings are popping up left and right and the first thing to go is on-the-job training.”

“Because, and I have to admit it, sometimes when I have an extra hour in my day, do I really want to spend it talking with someone or could I actually catch up on email. So you have to force yourself to do that. It is hard sometimes.”

Although there was general agreement that time and work demands often have a negative impact on learning, some partners noted that strong supervisors are somehow able to fully develop their staff despite those demands:

“I think the good seniors realize that they have staff on their job with varying levels of ability. A little bit of time invested up front goes a long way in saving time on the back end.”

“Those that are the absolute best on-the-job training work the most hours, yet they do seem to find time to train people.”

Finally, several partners believe that time and work demands could have a positive impact on OTJL. For example, in the view of these partners, high-pressure environments accelerate the pace of learning. Therefore, the process becomes more efficient and streamlined, since information can’t be given more than once. This result is consistent with McDaniel (1990), who found a positive effect of time pressure on audit efficiency.

“(t)hings are being thrown at you constantly that I think really help accelerate our young people in terms of their understanding of business and of people and of all the kind of components that it takes to bring success.”

“I don’t necessarily think the ‘old way’ was the way to do it, but I learned a lot in situations that were stressful and demanding and part of it was when you reflect back afterwards and think, ‘Wow. We did a lot in a short time and I learned a lot from the people that were there with me.’”

Others note that in situations of high time and work demands, there is a certain intensity that increases the bond between auditors and may actually increase the desire of supervisors to invest time in coaching junior auditors as captured in the following quote:

“Because you do work so closely together and perhaps for a very long period of time and it could be an intense period of time, in some ways I think that creates a situation or people invest heavily in you. They take a real keen interest in you. Even, in my example, it may be 10 o’clock at night, somebody will take the effort to teach you a task or a project or a skill because they do want you to be successful.”

Factor 4: Diversity of Workforce.

Prior literature in apprenticeship suggests that selecting a model that is similar in age, cultural background and outlook is important to the success of the master-apprentice relationship in the domain of continuing education (Farmer et al. 1992). In addition, prior literature in mentoring suggests that similarities/differences between supervisors and subordinates have an impact on the success of the mentoring relationship (for a recent summary of the related literature, see Reinstein et al. 2010). Diversity of the workforce references both differences in gender (male, female) and in cultural background (nation of residence, ethnicity, race, etc.) Anecdotal evidence suggests that the representation of female and culturally diverse partners in public accounting firms is growing.¹¹ Thus, we include diversity of the workforce among the factors that may have an impact on OTJL.

¹¹ In its 2010 Transparency Report, Deloitte reported that about 24 percent of their US partners/principals/directors are women and ten percent are minorities, while 44 percent of their US client service personnel are women and 32 percent are minorities. Deloitte also maintains that they “proactively seek diversity among new employees because [they] believe that a variety of backgrounds and perspectives enhances audit quality” (2010, 19).

Results show that partners are mixed on their views of diversity. Many more new partners than experienced partners noted positive effects of diversity, such as the ability to expose members of the audit team to diverse ideas and life experiences. The positive impacts of diversity in terms of providing new perspectives are captured in the following quotes:

“Whether it’s age, national origin or whatever that might be, that just brings different points of views that people can share and learn from and get different perspectives. So, and I think, if we are just talking about auditing in general, I think the more diverse the work force is, the better on-the-job learning would be.”

“I think from a cultural standpoint it has made people realize people of all races, gender etc can contribute and contribute very well to the execution of the engagement. From my perspective, anytime that you broaden your horizons both professionally, culturally and personally, that is just a fantastic situation.”

Others note specifically that diversity is helpful because it challenges auditors to think more creatively about their work, as noted in the following quote:

“You have to be adaptable. I don’t see that as a drawback. I think it can be more challenging for the coach because I think it is easier for that coach to take that cookie cutter mentality, but when you have a diverse group of individuals on a team, it certainly broadens the team and brings many different, more unique perspectives. I think it is helpful to the learning process.”

Despite the benefits of diversity, several auditors noted that greater diversity also has its challenges. One reason for this is that training cannot be provided in a “one size fits all” fashion. The lack of homogeneity is seen by some as a drawback, as noted in the following quotes:

“I expect that some people find it more difficult to give on-the-job training to certain groups and at the same time certain groups find it more difficult to receive on-the-job training than others do. That probably makes it more difficult because one size doesn’t fit all.”

“When you have got a lot of diversity, it can mean that you accept diverse opinions and diverse views and diverse ways of doing things when actually some of those aren’t the best ways to do things. So, there is actually a point at which unless you said it has to operate within a certain framework, that begins to detract from the learning experience because it confuses people.”

Others noted that another challenge of diversity is that when the supervisors are different from associates, the associates may have difficulty relating to their supervisors:

“I think part of the issue is you may have supervisors and partners and managers who are less diverse than the associates and if you have associates that don’t look up and see people that like them, they may not have the same connection with the firm as others.”

Several partners noted challenges specifically with firm employees from other countries who rotate in for temporary assignments from overseas. Some felt that the language barrier or lack of knowledge of U.S. GAAP was a problem, while others felt that the turnover issues caused supervisors to not want to invest in these people. There were several concerns about integrating these employees into the fabric of the US firm, as captured in the following quote:

“I think that it in many cases they come in with a lack of knowledge of generally accepted accounting principles in the US and they need to get up to speed very quickly in order to be able to function in a US environment and I think that lack of knowledge strains the on-the-job learning somewhat, at least that’s been my experience.”

Other partners expressed that while diversity is not negative, it presents a challenge in that coaches need to be prepared to adapt their teaching style to their audience. This is captured in the following quotes:

“I guess we coach differently depending on the person and their background. So I guess, in essence, if you are saying you’re coached differently that is communicating. On-the-job training has to be a little bit different too.”

“I think there are definitely different styles of learning from female versus male. There are different styles within each gender and I think you see that in the workplace on how you encourage and how you provide constructive feedback. So I think that has impact and I think you just adjust your style just as you would for anything else.”

Despite the positive and negative comments regarding diversity, many partners (about 40 percent) took a neutral position on diversity, and either felt there was no impact of diversity on OTJL, or expressed that the firm should hire the best candidates, no matter what their ethnic background, gender, or nationality as captured in the following quote:

“Just give me the best people to do the job. Give me people that want to learn and are bright and we’ll mold them from there.”

Factor 5: Reward Systems. Vera-Muñoz et al. (2006) suggest that extrinsic rewards (e.g., monetary compensation) tend to lead to knowledge hoarding as a source of power for job security.

However, Vera Muñoz et al. (2006) also maintains that team-based structures that foster development of personal relationships, like those found in public accounting firms, may internally motivate others to share knowledge. In practice, engaging in coaching activities (e.g., leading formal training sessions, actively communicating with teams/office members) continuous learning, and improvement of technical and auditing skills is “rewarded” directly via office/firm recognition (i.e., “Coach of the Month” award) and indirectly via the performance appraisal process; this process is used as the primary basis for promotions and compensation adjustments (Deloitte 2010). We also include audit firms’ reward systems among the factors considered in the study.

One way in which firms can focus the attention of busy professionals on OTJL is through specific inclusion of this activity in their professional reward systems. While we asked, “what impact do rewards have on on-the-job learning?”, most partner responses address a different question: “does on-the-job coaching lead to rewards?” Addressing this question, partners generally cited one of three formal reward systems within the firm: promotion, monetary (i.e., raise or bonus), and office/firm recognition. Some partners believe that on-the-job coaching *indirectly* leads to rewards, whereby engaging in coaching activities is one part of the formal evaluation process (i.e., positive/negative marks are a factor when determining promotions/raises). However, others feel that there is *no direct or indirect relationship* between on-the-job coaching and rewards. A view shared by several partners is that helping a subordinate learn is the reward itself:

"I don't personally feel that people are thinking about 'I am going to get a bonus for this, I am going to get extra money for that' ... so I am going to invest more time in coaching and teaching people. I think you do it because it is part of our culture and if you don't, then the person is going to make the same mistakes again and again. I guess the overall reward is the ultimate advancement and clearly people's views of how well you mentor and how well you teach are a factor in getting promoted."

“The reward is not monetary. The reward is the learner learns more, but the teacher gets a much better professional with which to work on future audits or with which to deploy into the firm ...so that is kind of the reward and I think too often people at the firm don't see that reward.”

“I think if you look at evaluation plans from partner down to a senior. One of the things is coaching and development. Who are you developing? Who are your mentees? My own partner plan has certain people that are assigned to me that I am responsible for developing... I think when we look at evaluating people yearly; seniors, associates and go through the year, people who are good coaches and they are getting very positive feedback and people enjoy working with them are going to be highly rated and paid more than people who may be very smart technically, but can't coach people, no one likes working for them, negative in the audit room. It's going to affect them negatively.”

Several partners also mentioned that there is difficulty in *measuring* how well someone coaches/learns on the job without direct observation. Because activities that are not measured cannot be well incorporated into formal reward structures, this implies that supervisors focused on extrinsic rewards will downplay coaching in favor of other activities that are easier to measure.

Differences in Perspectives Based on Partner Experience

The public accounting profession has undergone profound changes over the past two decades. For example, through the 1990's many firms experienced the dramatic growth of their consulting practices as well as a shift in audit methodologies to embrace a business risk-based approach (e.g., the Strategic Systems Auditing approach described by Bell et al. 1997). In the early 2000's, challenges to the profession brought on by accounting scandals such as the collapse of Enron and Arthur Andersen, led to the passage of SOX in 2002. Restrictions imposed by SOX and subsequent regulations resulted in reduction of the extent of auditor/client consulting relationships. Also, the focus on internal controls testing required by SOX Section 404 brought about a fundamental change in the nature of audits of large U.S. public companies. Thus, audit partners whose careers were formed from 1990 on (i.e., those admitted to the partnership in the mid 2000's) might have different perspectives on OTJL than partners who had achieved partnership status prior to the mid-1990's. To investigate whether there are “generational” differences in perspectives, we compare responses of relatively new versus seasoned partners throughout our discussion of results, finding several notable differences between groups.

With respect to similarities and differences in OTJL (apprenticeship) and characteristics of new staff and seniors over time, there are three main differences between new and experienced partners. First, new partners more frequently cite greater differences in firm/individual emphasis on coaching relative to experienced partners. Second, new partners feel more strongly that that new staff have a lower level of commitment to the profession (and/or staying long term with the Firm), relative to experienced partners. Third, relative to experienced partners, new partners indicate more frequently that seniors have less exposure to technical accounting, as this work is being performed more often and at the higher levels (manager, senior manager). Some of these findings suggest a more negative view by newer partners, perhaps due to the recency of their own passage through the difficult period preceding attainment of partner status.

We note four main differences between new and experienced partners relating to the impact of organizational factors on OTJL. First, relative to experienced partners, new partners feel more strongly that IT enhances flexibility, but reduces the ability to coach and reduces human interaction. This suggests a greater awareness of some negative and positive effects of IT by newer partners, perhaps because they are more likely have “grown up” using these technologies themselves. Second, with respect to supervisory and feedback practices, new partners are more likely to indicate that the timeliness of feedback is important and that feedback is less effective when not given in real time. Third, when discussing diversity, about half of all partners indicated that the main benefits of diversity are related to the varying life perspectives and experiences that diverse individuals bring to the table. It is notable that 63 percent of new partners share this perspective, relative to only 29 percent of experienced partners. Fourth, more new partners than experienced partners believe that good coaching is rewarded as a part of the firm’s (annual) evaluation process.

CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

This study reports results of interviews with 30 highly accomplished audit partners on the topic of on-the-job learning in general, and learning through apprenticeship specifically. While there are many specific results, we discuss here several overall patterns in the findings, and note future research opportunities arising from them. Overall, our results affirm the importance of OTJL in audit practice. The partners we interviewed generally perceive that the “craft of auditing” (i.e., the technical knowledge and skills necessary for good performance) is primarily learned while working within engagement teams, where subordinates observe and are coached by superiors. These methods, modeling (observation) and coaching, are two components of the CA model, which suggests that apprenticeship is present in public accounting firms. The partners we study generally affirm that an apprenticeship model is a key component of OTJL, but they vary somewhat in beliefs regarding its levels of application (e.g., between partner and manager, between senior and staff). Variance in responses implies that apprenticeship may be inconsistently applied, and so its use could potentially be expanded within auditing firms. Future research could explore whether increased emphasis on apprenticeship at all levels in firms would be beneficial for auditor development.

While our results show that the apprenticeship model of development exists in public accounting, we also provide evidence on how apprenticeship functions and on factors affecting its success in promoting auditor learning. For apprenticeship to be effective, three principal elements are necessary: the learner, the guide, and the practice environment. We asked for partners’ views about the application and effectiveness of OTJL and apprenticeship in terms of characteristics of the people involved and the organizational context in which it takes place. Our results generally show that these elements are present, but we identify some challenges in all three areas.

Although most partners perceive that an apprenticeship model in some form is currently practiced in auditing, our results based on partner recollections suggest while some parts of the theoretical CA model are often present in practice (modeling and coaching), other parts are not as

apparent (including scaffolding, articulation, reflection and exploration). We recognize that current partners' recollections may not validly represent the experience of individuals in current audit practice, both because of environmental change, and because individuals who have "made it" in the system may have had different experiences than those who did not. Future research could examine whether these phases are currently under-represented, from the perspective of associates and seniors. Research could also explicitly study whether these under-represented phases actually result in better learning in the auditing environment. For example, the CA step of reflection on one's performance is infrequently mentioned, yet one audit firm incorporates reflection as an element of its workpaper documentation process. Another example, is the provision of feedback, a key intrinsic element of coaching (and scaffolding). Our results show that partners believe that good coaching is frequently hampered by unwillingness to give candid feedback. Future research may examine how firms can improve the delivery of constructive yet candid feedback.

In order for learning to be effective, there must be *willing and competent* coaches as well as *receptive* learners who are able to understand what is being taught and apply it to practical situations. In terms of the qualities of learners, we find that partners' views vary regarding how audit staff have changed over the past ten to 30 years. They note positive aspects of the new staff such as intelligence, preparation and IT skills. However, they also cite concerns about the commitment of new staff to the accounting profession, and their expectations about what the firm will do for them rather than what they will do for the firm. We also observe some concerns regarding the lack of motivation of new staff to engage in activities leading to a deep level of understanding about the craft of auditing. Many partners recall that their own learning was enhanced by personal initiative, selecting appropriate role models and responding to challenges. Therefore, given the importance these partners ascribe to their own initiative and observation of others when learning auditing, an apparent lack of motivation of some staff is a concern for the future. The question arises as to how

firms can foster these traits among new auditors, e.g., through differential selection or training. Interestingly, these concerns are not voiced by partners when discussing seniors. This suggests that individuals with low motivation may be leaving the firm before being promoted to the level of senior.

The CA model also indicates that the environmental context in which learning takes place is important. Most partners indicate that the increasing complexity of standards is a key challenge in today's audits. These complexities are especially challenging for seniors as both coaches and learners because many technical aspects of the senior's role are being pushed up to the manager level, potentially delaying their technical maturity and hence their ability to coach newer staff.

When asked about organizational factors influencing the relative success of OTJL and apprenticeship through time. Technology is seen as beneficial but a price is paid in loss of human interaction, which is a necessary component of effective apprenticeship. Additionally, work demands are high at all levels, which most partners fear prevents adequate time to coach and learn. One potential remedy would be to implement a reward structure which more strongly recognizes the long-term value of effective coaching to audit quality. However, partners note that there are challenges in measuring effectiveness in this context. While our interviews contain a number of insights regarding the qualities and activities of auditors engaged in coaching and learning, several partners commented that it is difficult to discern how good people are at these activities unless they are observed. Our results on the effects of technology imply that opportunities are increasingly limited for direct observation by partners of the interaction between managers/seniors and seniors/staff as they coach and learn. Further research could identify ways in which firms could more adequately measure the effectiveness of coaching and learning on the job, in a technologically advanced environment. Also, our data suggest some concern that formal feedback has changed over time to emphasize "softer" measures rather than more technical aspects of auditing. Future research

could examine whether this tendency is observed across the profession, and if so, what are its effects?

In addition to the research issues noted above that arise from our main conclusions, several specific future research questions arise from the limitations of our research design. First, conclusions based on qualitative inquiry always involve researcher interpretation. All of the researchers on this paper have prior experience in public accounting, which may bias the conclusions in a more favorable or unfavorable manner. Second, some of our questions asked partners to recall past events. Those responses may be subject to recall bias. Third, we interviewed partners from the U.S. practice of a single Big 4 firm. Thus, the extent to which our results generalize to auditors in smaller firms and in other countries is unknown. Also, responses of successful partners may not represent the experiences of individuals who have left the firm before attaining partner. Some of those individuals may have left due to inadequate training. Future research could examine whether there is an association among effective apprenticeship, job satisfaction, and auditor retention rates. Fourth, our data are limited to impressions of partners. Because prior research (Dirsmith and Covalleski 1983) shows rank-associated differences in opinions of firm practices related to mentoring, research should also examine perspectives of current audit associates and seniors, who are currently learning the craft of auditing.

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Table 1
Demographic Information on Participants

	Experienced Partners <i>(admitted to the partnership prior to 2000)</i>	New Partners <i>(admitted to the partnership post 2000)</i>
N	14	16
Mean Years Experience	32.9	15.4
Range of Partner Induction Years	1983 - 1993	2005-2008
Male	93%	44%
Female	7%	56%

Region	All Partners
Mid-Atlantic	13%
Midwest / Ohio Valley	6%
Pacific Northwest / N. California	16%
National Office	32%
Northeast	19%
South	13%
Primary Industry Specialty¹²	All Partners
Consumer products and services	34%
Financial Services	26%
Technology	23%
Health Care	9%
Other	9%

¹² Some partners indicated more than one industry specialty over the course of their career. The percentages include a representation of multiple specialties for these partners. The category of “Financial Services” includes real estate, private equity, investment management, banking, capital markets and mergers and acquisitions. The category of “Other” includes oil and gas, not-for profit, and entertainment.

Table 2
Partner Experiences Learning the Craft of Auditing mapped to the Cognitive Apprenticeship Framework

CA Model Teaching (Learning) Methods	Definitions (Collins 1989)	Total (n=30)	Percentage of Total Participants Responding	Percentage of Experienced (n=14)	Percentage of New (n=16)
Modeling (Observation)	<i>Modeling</i> involves an expert carrying out a task for a learner to observe and build a conceptual model of the process that is required to accomplish the task.	16	53%	43%	63%
Coaching	<i>Coaching</i> consists of observing learners carry out a task and providing support offered in the form of hints/clues, reminders, feedback, and/or demonstrations related to specific actions/problems that come about while the learner is attempting to execute the task on their own	19	63%	57%	69%
Scaffolding and Fading	<i>Scaffolding and fading</i> are temporary supports the expert provides to help the learner carry out the task the in the form of suggestions and help; this support is removed when no longer needed.	4	13%	14%	13%
Articulation	<i>Articulation</i> is when learners are required to explain what they are thinking related to their acquired knowledge, problem solving, or reasoning (i.e., critique or monitor someone else and explain why it is good/poor).	2	7%	7%	6%
Reflection	<i>Reflection</i> encourages the learner to think about improving their performance by “replaying” and comparing their way of thinking to others on similar tasks.	4	13%	14%	13%
Exploration	<i>Exploration</i> encourages learners to try out different hypotheses, methods, and strategies.	1	3%	7%	0%

Notes: This table is presented in the sequence of the teaching methods component of the cognitive apprenticeship framework.

APPENDIX A: QUESTIONNAIRE¹³

We define “on-the job learning” as all ways that auditors learn in their working environment about how to appropriately perform their professional roles. This includes both formal learning practices and opportunities (e.g., classroom training, e-learns, peer discussion, review by interview) and informal learning through discussion with supervisors and peers).

PART A: ON-THE-JOB LEARNING

1. Consider on-the-job learning in the auditing profession now versus 10-20 years ago. What are the similarities? What are the differences?
2. We have composed a list of organizational factors that might affect on-the-job learning. We would like to explore each factor with you and discuss your observations about their impact, either positive or negative, on on-the-job learning. [Provide Attachment]
3. What is your impression of new staff entering the firm, compared to new staff in the past, say 10 or 20 years ago?
4. Now consider seniors. What is your impression of today’s seniors, compared to seniors in the past, say 10 or 20 years ago?

PART B: APPRENTICESHIP

5. Some have applied the term “apprenticeship” to describe one way in which on-the-job learning occurs in the auditing profession. Apprenticeship is traditionally defined as an experienced “master” working with one or more “apprentices” to learn the craft of auditing, as distinct from formal mentoring programs. Do you believe an apprenticeship model is being practiced today in public accounting? If so, at what levels do you believe that the apprentice/master relationship is practiced?
6. In your own experience, how did you learn the “*craft of auditing?*”

¹³ These ten questions represent the final instrument was used to guide all 30 interviews. In some cases, not all ten questions were asked due to partner time constraints.

7. Tell me about your most meaningful experience while *learning* the craft of auditing, at any professional level.
8. Tell me about your most meaningful experience while *teaching* the craft of auditing at any professional level.
9. Do you believe that the use of apprenticeship has changed over the course of your career? If yes, how?
10. At the beginning of our interview we discussed organizational factors as they relate to on-the-job learning. We would like to revisit this same list - however we would like to specifically focus your responses to their impact on apprenticeship. [Provide Attachment]

APPENDIX A: ATTACHMENT¹⁴

We have composed the following list of organizational factors that might affect on-the-job learning (apprenticeship.) We would like to explore each factor with you and discuss your observations about their impact, either positive or negative, on on-the-job learning (apprenticeship).

1. Information technology
2. Organizational culture (*Culture of learning; culture where expertise is valued; comfortable work environment; competition and politics discourage knowledge sharing*)
3. Diversity of Workforce
4. Supervisory and feedback practices
5. Time and work demands
6. Reward systems
7. Organizational support (*Range of activities, experts and client; auditors are able to experience process and outcome*)
8. Centralization/Decentralization of Formal Training (*National versus regional or local training*)
9. Team approach to work
10. Other – Are there any other organizational or audit team factors that you believe impact, either positively or negatively on-the-job learning?

¹⁴ These factors represent the list of factors that was physically provided to all partners in advance of their interview. Researchers asked consistent follow up questions about two additional factors that were brought up by partners: physical environment and regulatory environment.

Appendix B: Detailed Percentages of Results

B.1 Apprenticeship As Practiced in Public Accounting

Apprenticeship is practiced in public accounting	Total (n=30)	Percentage of Total Participants Responding	Percentage of Experienced (n=14)	Percentage of New (n=16)
Yes	20	67%	64%	69%
Somewhat	9	30%	21%	31%
No	1	3%	7%	0%

B.2 Partners' Examples of "Learning the Craft of Auditing"

Learning the Craft of Auditing	Total (n=30)	Percentage of Total Participants Responding	Percentage of Experienced (n = 14)	Percentage of New (n = 16)
Received guidance (formal & informal)	25	83%	86%	81%
Personal initiative/activity (asking questions, minimal or no guidance, trial and error)	17	57%	71%	44%
Observation and selection	14	47%	36%	56%
Feedback/review notes	9	30%	29%	31%
Being challenged	8	27%	14%	38%

B.3 Similarities and Differences in OTJL over Time

Panel A. Summary Statistics

Similarities	Total (n = 30)	Experienced (n=14)	New (n=16)
<i>Coaching</i> (emphasis of, quality of instruction, structure)	67%	71%	63%
Differences			
<i>Information Technology</i>	57%	57%	56%
<i>Formal Training</i> (classroom content, structure, length and method of delivery)	50%	57%	44%
<i>Coaching</i> (firm and/or individual emphasis)	43%	14%	69%
<i>Environment</i> Increased Risk & Complexity	30%	36%	25%
Increased Partner/Manager Involvement	23%	29%	19%

Panel B. Percentages related to similarities and differences in new staff

	Total (n=30)	Percentage of Total Participants Responding	Percentage of Experienced (n=14)	Percentage of New (n=16)
Staff - Positive				
Intelligence/ qualification	14	47%	50%	44%
Better prepared for work	7	23%	14%	31%
IT oriented/ savvy	6	20%	21%	19%
Staff - Negative				
Work ethic & motivation	13	43%	21%	63%
Commitment to the profession	10	33%	36%	31%
Staff expectations of the Firm	9	30%	29%	31%

Panel C. Percentages related to similarities and differences in seniors

Seniors	Total (n=30)	Percentage of Total Participants Responding	Percentage of Experienced (n=14)	Percentage of New (n=16)
Increase in the complexity of the audit	18	60%	57%	63%
Technical responsibility has decreased	8	27%	7%	44%
Audit./technical maturity has decreased	7	23%	21%	25%
Administrative role of the senior has increased	6	20%	0%	38%

B.4 Summary of Organizational Factors Impacting OTJL

Information Technology - Positive	Total (n=30)	Percentage of Total Participants Responding	Percentage of Experienced (n = 14)	Percentage of New (n = 16)
Accessibility of information	22	73%	71%	75%
Timeliness of obtaining accounting and auditing information	15	50%	36%	63%
Facilitation of training & learning (timeliness, consistency of information)	11	37%	43%	31%
Flexibility	9	30%	14%	44%
Information Technology - Negative				
Less human interaction	21	70%	57%	81%
Reduces ability to coach/provide feedback	12	40%	21%	56%
Distractions/ Multi-tasking	9	30%	29%	31%
Supervisory & Feedback Practices				
Difficulty providing candid (negative) feedback	19	63%	50%	75%
Quality of feedback differs by individual	13	43%	43%	44%
Timeliness of Feedback is Important	12	40%	21%	56%
Written versus face-to-face feedback (content, impact of message)	10	33%	29%	38%
Feedback is not given in real time	9	30%	21%	38%
Formal feedback is "soft"	8	27%	21%	31%
Feedback is an important factor in OTJL	8	27%	29%	25%

B.4 Summary of Organizational Factors Impacting OTJL (continued)

Time & Work Demands - Neutral				
Environmental characteristics increase the time-work demands of auditors	11	37%	36%	38%
"Good auditors" are able to manage their time	9	30%	29%	31%
Time & Work Demands - Negative				
Limits the amount of time spent on coaching and providing OTJ Feedback	23	77%	79%	75%
Diversity				
Different life perspectives and experiences	14	47%	29%	63%
No impact on OTJL	12	40%	64%	19%
More difficult to coach	11	37%	21%	50%
Bring in the smartest people (diverse or not)	6	20%	21%	19%
Rewards				
No relationship between rewards OTJL	11	37%	43%	31%
OTJ Coaching indirectly leads to rewards (part of annual evaluation)	9	30%	14%	44%

Notes: Responses are presented by experience level and presented in descending order by total; only those items with 20% or greater response rate are included in this table.