Job Design and Job Satisfaction in Work Placement: Evidence From the On-the-Job Training at Audit Firms

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Abstract

This paper aims to test the relationships between job design aspects and job satisfaction in on-the-job training, as well as the mediating role of training effect in these relationships. Regression and mediation analyses were performed based on the data collected from a questionnaire-based survey on the senior accounting students' audit work placement at audit firms. We conclude that repeated tedious non-professional job aspect is negatively related to job satisfaction, whereas judgmental professional job aspect is positively related to job satisfaction. We also conclude that the training effect of work placement is playing a partial mediating role in the identified positive relationship while having no mediation in the negative one.

Keywords: job design, job satisfaction, work placement, on-the-job training, audit firms

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Introduction

Experiential learning for accounting graduates is a critical stage for them to perceive as new hands at entrance their accounting career development shortly (International Accounting Education Board [IAESB], 2021). The work-integrated learning experience through work placement can help them shape the cognition and image of future jobbers as public accountants (D'Abate et al., 2009). Particularly, job satisfaction during work placement will have critical impacts on the career decision facing these accounting students shortly before their graduation.

Additionally, the concept of training effect plays an especially important role when it comes to work placement, as the overall objective of work placements is to improve the skills of the interns and to provide the interns with practical training. From previous literature, a possible mediating role of training effect can be assumed (D'Abate et al., 2009). Thus, it is appropriate to examine whether the training effect plays a mediating role in the relationship of job design aspects and job satisfaction in the context of work placements as previous literature fails to examine this model explicitly.

This paper aims to test the relationships between job design in work placement and job satisfaction, as well as the mediating role of training effect in these relationships, based on the data collected from a questionnaire-based survey was completed among a group of senior accounting students who had just finished their work placement at audit firms.

This study makes its unique contribution to the existing accounting education literature by applying the behavioural and cognitive perspectives such as job design, training effect, and job satisfaction in accounting research. Our findings are implicative to accounting schools and audit firms in improving job training for their students and future employees.

Some Institutional Features of Chinese Accounting Education

As this paper applies features such as job design, training effect, and job satisfaction to new accounting professional on-the-job experiential learning and the data used in this paper was collected from senior accounting students after a work placement at audit firms, it is essential to take a preliminary look at some institutional features of Chinese accounting education. At least three institutional features of the Chinese accounting university education offer a significant opportunity of studying Asian accounting education. First, China is the largest economy in Asia, fully representative of the emerging and tran-

sitory markets in the world. Second, there is an emerging and increasing demand for quality audit professionals in the course of rapid social and economic developments in China. Lastly, Chinese educational systems are similar to those in other Asian countries by sharing cultural values.

The Chinese rapid economic growth in the most recent four decades calls for powerful support and safeguard from a well-educated auditing profession. The behavioural and cognitive aspects of accounting education and audit skills training are crucial to the formation of a well-functioning auditing profession in China. Liu (2012) points out that nowadays in the key Chinese universities that focus on the training effects of placing their accounting students in the field practices at audit

firms, and that the work placement through internships is a compulsory part of the accounting schools' curriculum. Pedagogically speaking, audit work placement via the university-and-audit-firm cooperative education programs not only helps students to enhance their understanding of the textbooks taught in the classroom but also lays solid foundations for successful future professional careers (Liu, 2012).

This study focuses on job design in audit work placement and job satisfaction for senior accounting students in the Chinese auditing professional context. Table 1 lists the common characteristics of audit work placement for the Chinese accounting students as summarized in comparisons with the job aspects described in Maertz Jr. et al. (2014).

Table 1Characteristics of Audit Work Placement for Accounting Students in China

Dimension	Description of Work Placement Features
Payment	Paid at the minimum wage level
Schedule	Full-time work
Participan	Undergraduate and professional internship
Credit	Academic course credit
Academic requirement	High formal academic requirements and on-the-job experiences
Organizer	Arranged officially between intern-employer and school
Internship duties	Well defined and well planned, not "do whatever is needed or asked"
Work format	Project-based format, not job-based format
Mentorship	Work sponsor and mentor (i.e. experienced CPAs in the audit firm)
Future job opportunity	Implication regarding future bilateral job/recruitment opportunity

Literature Review and Development of Research Hypotheses

As it is widely accepted by both business researchers and practitioners, job design aspects and characteristics are significantly related to job satisfaction (e.g. Hackman and Oldham, 1976; Humphrey et al., 2007; Sutherland, 2013). Although there are different ways to categorize job aspects, job design has been generally defined as designing task and role content of jobs to fit in the social and psychological needs of job takers (Mills, 1973). Theoretically, there shall be some associations between job design as work inputs and job satisfaction as social and cognitive outcomes.

Job satisfaction, job design, and their correlation with each other are widely discussed themes in business literature and among practitioners. Job satisfaction is usually paraphrased as the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs and is one of the central variables discussed in organizational behavior research and business psychology (Umstot et al., 1976). Job design, on the other hand, has been paid little attention to initially. In general, the research on job design aims to better understand this relationship and to improve jobs to increase satisfaction and

performance (Mills, 1973).

The way to motivate employees and in turn to increase their job satisfaction along the lines of job design is thoroughly discussed, and this has become popular research work in job design theory (Hackman & Oldham, 1976), Furthermore, Kiggundu (1983) extends the job design theory by Hackman and Oldham (1976) and develops the concept of task interdependence, and integrates it into the Hackman and Oldham model Another contemplation of Hackman and Oldham's theory is Fried and Ferris (1987)'s examination of the validity of Hackman and Oldham's theory, which concludes that, in line with Hackman and Oldham (1976), job aspects such as autonomy, variety, and significance can increase positive impacts of job design on job performance and satisfaction.

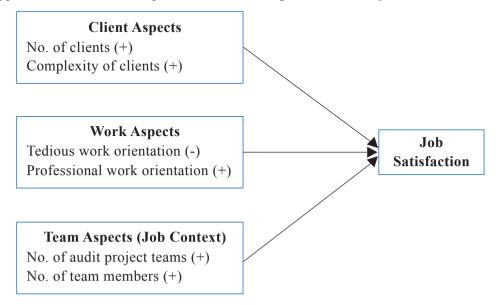
The research construct of job design may include different single facets of, such as the number of clients, tedious or professional work orientation, and the number of team members. They can be grouped into broader categories, which are labelled as client-related aspects. work aspects, and team aspects (Morrison et al., 2005). From the detailed analysis of the above-mentioned significant research articles, it can be concluded that job design or rather the single aspects as

components of job design have differing relations to job satisfaction. Therefore, the following three hypotheses can be deduced to explore the relationship between job design and job satisfaction. All of the following hypotheses are under constrain of the control variables gender and firm size

Both Hackman and Oldham (1976) and Fried and Ferries (1987) conclude that job aspects such as autonomy, variety, and significance can increase positive impacts of job design on job performance and satisfaction. Verhofstadt et al. (2007) find out that higher educated workers like university graduates are more satisfied with their jobs because

they have a job of better quality, however, the association between the level of education and job satisfaction is negative for the first job. Humphrey et al. (2007) criticize that most of the existing job satisfaction studies only focus on work aspects, ignoring social and contextual aspects of work. Hackman and Oldham (2010) revisit the characteristics of job design in the past and envisage some new trends in the future. To follow this criticism, we include in the regression model two team aspects as social contexts in addition to those job aspects. Our research hypotheses on the relationships between job aspects and job satisfaction are considered in Figure 1.

Figure 1 *Hypotheses on Relationships between Job Design and Job Satisfaction*



Therefore, the following three hypotheses can be deduced to explore the relationship between job design and job satisfaction:

H1.1: Concerning client aspects, both the number and the complexity of clients have a positive relationship with job satisfaction.

H1.2: In work aspects, tedious work orientation has a negative relationship to job satisfaction, whereas professional work orientation is positively related.

H1.3: The included team aspects, number of audit project teams, and number of team members are both positively related to job satisfaction and provide job context.

Some further studies concern how people are satisfied with their jobs. Some scholars prove that jobs with high problem-solving requirements increase job satisfaction because these jobs provide a chance of demonstrating and reinforcing the sense of professional and judgmental competence on the job (Deci and Ryan, 2000; Humphrey et al., 2007). Both Mohr and Zoghi (2008) and (Deci & Ryan, 2000) deduct from their research that satisfied workers are more likely to increase participation in high-involvement practices in the social contexts and individual differences

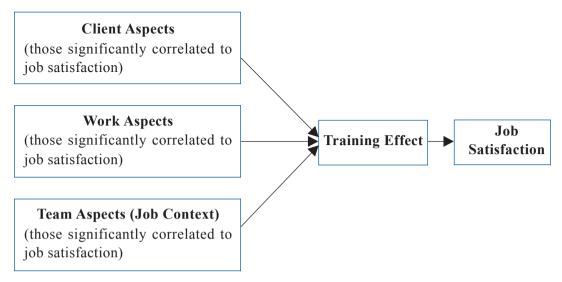
that support satisfaction of the basic needs. It can be assumed that this also or especially applies to students in the on-the-job work placement as it provides the students with the first opportunity to experience professional work and to prove the skills they gained in school, while high involvement and high problem-solving practices increase training effects for the students.

Some studies elaborate on the mediating impact of certain factors on the training effect. Cotton et al. (2002) conclude that a friendly job design environment increases the students' job satisfaction, eventually leading to higher performance expressed in grades. As job designs that provide for high levels of employee control also provide increased opportunities for the development and exercise of skills, the perceived skill utilization plays a mediating role (Morrison et al., 2005). This implies that the hypothesis of training effect plays a mediating role between job design and job satisfaction as skill utilization can be seen as one prerequisite for skill improvement and training effect. Morgeson and Humphrey (2006) observed that knowledge characteristics predict satisfaction, while knowledge characteristics are also related to training, which again might indicate a mediating role of training effect. Another study emphasizing the training effect by Klein and et al. (2006) concludes that for motivation and satisfaction of entry-level professionals on-the-job training effect plays an especially important role. Furthermore, high motivation improves a learner's evaluation of the chance to learn new things and to extend the range of professional competencies. Howard et al. (2006) conclude that the on-the-job training effect is especially important to motivate and satisfy the new entry-level professionals and that a strongly motivated learner at the workplace evaluates highly the change to learn new things and to extend the range of professional competencies.

To grasp these implications in prior literature regarding the impacts of the on-the-job training effect, we conjecture that the training effect may play a mediating role in the relationship between job aspects and job satisfaction. Our related hypotheses are expressed by the structural equation model (SEM) in Figure 2. Accordingly, the following three research hypotheses can be formulated:

- *H2.1:* The training effect mediates the relationship between the significantly correlated client aspects and job satisfaction.
- *H2.2:* The training effect mediates the relationship between the significantly correlated work aspects and job satisfaction.
- *H2.3:* The training effect mediates the relationship between the significantly correlated team aspects and job satisfaction.

Figure 2
Hypotheses on Mediating Role of Training Effect



Research Methodology

Data Collection

The research data for this study have been collected from a questionnaire-based survey on the cooperative accounting education arrangement in a top-tier Chinese university. The 30-minute surveys were administered anonymously among 350 interns in total who returned from the four-month work placement at Audit firms officially assigned by the university and 15 contracted Audit firms. Tow hundred and eight effective responses were collected. All the guestionnaire items were either adapted from the existing literature or designed based on the interviews with 20 representatives from the target population who participated in a pilot pre-test before the formal surveys.

Variables

This study investigates three variables including job satisfaction (SATISFAC-TION), job design features (WK_TEDI and WK_PROF), and on-the-job training effect (TRE). The questionnaire items for measuring these variables are listed in Appendix attached at the end of the paper. Table 2 presents a summary of all the variables in this study.

Reliability of Measurement

To testify the internal consistency

and the reliability of the measurement scales of a study usually, Cronbach's α is applied. The Cronbach's α coefficients for the student's job satisfaction (SATISFACTION) and the on-the-job training effect (TRE) are .87 and .90 respectively. Generally, a Cronbach's α above .70 is considered to prove adequate internal consistency. Therefore, it can be concluded that these testing results prove sufficient reliability in the design of the measurement scales. Additionally, the total Cronbach's α is .88 indicating good internal consistency and reliability of the overall research design.

Validation

Construct validity testifies whether a research model measures what it claims to measure, so it aims to represent the model fit. The resulting model fit indicators are summarized in the following Table 3. The absolute fit indices obtained include the $\chi 2$ test, the Root Mean Squared Error of Approximation (RMSEA), and the Goodness of Fit (GFI). The $\chi 2$ test is non-significant at p=.22 and the ratio of the $\chi 2$ to the degrees of freedom is at 1.502 (< 3), therefore both indicate a good fit. Moreover, the RMSEA at .05 can barely still be considered a roughly good fit, while the GFI at 1.00 indicates a good

 Table 2

 Description and Measurement of Variables

Variable	Description	Measurement
SATISFACTION	Dependent variable indicating job satisfaction with work placement	Average of 7 questionnaire items measured at a 7-grade Likert scale
WK_TEDI	Extent of repeating tedious non-professional jobs during work placement	Average of 7 questionnaire items measured at a 7-grade Likert scale
WK_PROF	Extend of performing judgmen- tal professional tasks during work placement	Average of 11 questionnaire items measured at a 7-grade Likert scale
CL_NO	Number of clients experienced during work placement	As described
CL_CMPLX	Dummy for client complexi- ty experienced during work placement	0 for private unlisted clients, and 1 for listed firm or joint venture clients
TM_NO	Number of teams attended during work placement	As described.
TM_PEERS	Average number o peers on audit engagement teams	As described
GENDER	Control variable, indicating gender feature of question-naire respondents	0 for male, and 1 for female
FIRMSIZE	Control variable, indicating small, large, and international audit firms	1 for small-size firms, 2 for large domestic firms, and 3 for interna- tional firms

fit. Among the relative fit, indices are the Normed Fit Index (NFI), the Incremental Fit Index (IFI), and the Comparative Fit Index (CFI). All these relative fit indices are > 0.90 implying a good fit. Overall, it can be said that the model simulates and represents the observations of the data set well.

Table 3Summary of Model Fit

$\chi^2 = 1.502$					
Degrees of freedom = 1	CMIN/df = 1.502				
$Probability\ level = .220$					
RMR, GFI					
Model	RMR	GFI	AGFI	PGFI	
Default model	.002	.998	.916	.018	
Saturated model	.000	1.000			
Independence model	.078	.694	.626	.568	
Baseline comparisons					
Model	NFI	RFI.	IFI	TLI	CFI
Default model	.996	840	.999	.940	.999
Saturated model	1.000	1.000	1.000		
Independence model	.000	.000	.000	.000	.000
RMSEA					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	.051	.000	.205	.327	
Independence model	.207	.189	.225	.000	

Testing Methods

The testing methods used in this study include two parts. The following regression model is used to test the hypothesized relationships between job design aspects and job satisfaction.

 $SATISFACTION = \alpha + \beta_1 CL_NO +$ $\beta_2 CL_CMPLX + \beta_3 WK_TEDI +$ $\beta_4 WK_PROF + \beta_5 TM_NO + \beta_6 TM_PEERS +$ $\beta_7 GENDER + \beta_8 FIRMSIZE + \varepsilon$

An SEM-based on Figure 2 is used to test whether the training effect mediates the proven significant relationship between job design and job satisfaction.

Empirical Results and Analyses

Descriptive Statistics and Bivariate Correlation Analysis

Table 4 reports high job satisfaction (M = 4.99) and training effect (M = 5.26). It also shows the statistical characteristics of other variables under investigation.

Table 4Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Standard Deviation
SATISFACTION	208	1.86	7.00	4.99	1.00
TRE	208	2.44	7.00	5.26	.85
CL_NO	206	.00	25.00	5.86	4.71
CL_CMPLX	201	.00	1.00	.42	.35
WK_TEDI	208	1.30	7.00	4.86	1.07
WK_PROF	208	1.00	7.00	3.83	1.18
TM_NO	205	1	25	5.80	4.42
TM_PEERS	204	2.0	48.0	7.03	5.08
GENDER	208	0	1	.76	.43
FIRMSIZE	208	1.00	3.00	1.91	.65
Valid N (Listwise)	198				

Table 5 reports the Pearson bivariate correlations between the studied variables. SATISFACTION is significantly associated with all the other variables except GENDER, while TRE is very significantly (p < 0.01) correlated to WK_PROF and FIRMSIZE. It can be preliminarily observed that job satisfaction is related to most job design aspects and that only one job aspect WK_PROF is significantly correlated to job satisfaction.

Tests on the Correlations Between Job Design and Job Satisfaction

Table 6 reports the regression results. The empirical results prove that tedious non-professional tasks are negatively correlated to job satisfaction (p < 0.01), whereas the correlation between judgmental professional tasks and job satisfaction is positive (p < 0.01). No other variables significantly contribute to job satisfaction except for *FIRMSIZE*.

Table 5 Pearson Bivariate Correlation Analysis

Variable	1	2	3	4	5	6	7	8	9	10
1. SATISFACTION	N —									
2. TRE	.472***	_								
3. CL_NO	238***	063	_							
4. CL_CMPLX	.184***	.133*	331***	_						
5. WK_TEDI	207***	.071	.237***	011						
6. WK_PROF	.385***	.468***	.014	.014	.214					
7. TM_NO	244***	095	.805***	303***	167**	034	_			
8. TM_PEERS	.196***	.115	218***	.279***	218***	051	250***	_		
9. GENDER	063	.097	.114	.017	.122*	.032	.109	051		
10. FIRMSIZE	.497***	.263***	395***	.419***	164*	.240***	397***	.222***	043	<u> </u>

Note: *** p < 0.01 (2-tailed); ** p < 0.05; * p < 0.10.

Table 6 Results of Regression on Job Satisfaction

Explanatory	Standardized Coefficient					
Variables	Beta	t	Sig.			
(constant)	020	9.370	.000			
CL_NO	020	189	.850			
CL_CMPLX	011	170	.865			
WK_TEDI	207	-3.309***	.001			
WK_PROF	.318	5.127***	.000			
TM_NO	003	025	.980			
TM_PEERS	.084	1.358	.176			
GENDER	018	305	.760			
FIRMSIZE	.375	5.240***	.000			
Model Summary						

 \mathbb{R}^2 Adj.R² R S.E. F Sig. .353 14.455 . 000 .616 .380 .81306

Note: *** p < 0.01 (2-tailed); ** p < 0.05; * p < 0.10.

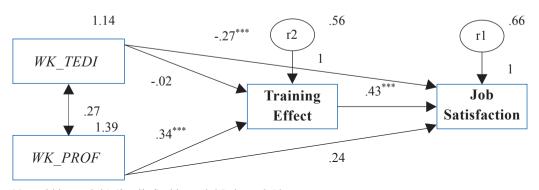
The results provide evidence on the main effects between job design and job satisfaction with the work placement during the internship programs, which is consistent with the findings in prior job satisfaction studies, such as Cotton et al. (2002), Morrison et al (2005), and Liu (2012). This finding implies that engaging the interns in tasks requiring professional judgment and decisions can

enhance their experiential learning effects and career interests through applying the knowledge and skills learned in the classroom into real-world practices, while excessive tedious job assignments are quite likely to discourage college students from entering the accounting profession, due to a negative initial impression marked by their internship experiences.

Tests on the Mediating Role of Training Effect at Work Placement

Figure 3 describes the SEM results of the conceptual modeling on the potential mediating role of the training effect.

Figure 3
SEM Results Regarding Mediating Role of Training Effect



Note: *** p < 0.01 (2-tailed); ** p < 0.05; * p < 0.10.

A significant (p < 0.01) partial mediating function of TRE exists in the relationship between WK_PROF and SATISFACTION, not in that between WK_TEDI and SATISFACTION. These results lead to the conclusion that the training effect plays a signifi-

cant mediating role only in the relationship between judgmental professional tasks and job satisfaction, not in that between tedious non-professional tasks and job satisfaction. Note further that the mediating function of *TRE* is partial, which means that the judgmental professional job aspect significantly increases job satisfaction and the good onthe-job training effect in work placement is enhancing this increase.

This finding shares consistency with that in Morrison et al. (2005). The positive aspects of job design requiring professional judgment and decisions are identified to create a benign and beneficial work placement environment, thus the interns can more effectively achieve better performance through improving job satisfaction in Morrison et al. (2005), or they can enhance the training effects to obtain higher job satisfaction in this study.

Conclusions, Contributions, and Implications

This study gives insights into several matters revolving around the relationship of job design aspects with job satisfaction and the additional mediating role of onthe-job training effect in the context of audit work placements. The conclusions of this study include two parts. First, tedious non-professional tasks in work placement decrease job satisfaction, whereas judgmental professional tasks increase job satisfaction. Second, the partial mediating role of training effect significantly enhances the relationship between judgmental professional tasks and job satisfaction, in

other words, if more judgment professional tasks were given, they could improve the training effect of work placement and eventually better job satisfaction.

With the conclusions drawn from the empirical tests, this study makes its unique contributions to the existing accounting internship and job design literature. Firstly, this paper introduces the internship programs for undergraduates into the accounting experiential teaching and learning research areas. Secondly, it documents the evidence that the training effects play a mediating role in the relationship between job design and job satisfaction. Lastly, this study differentiates the tedious job assignments from judgmental professional tasks completed by accounting interns in an audit work placement, which helps clarify how to improve the training effect and job satisfaction by optimizing job design.

The most important implications for universities are two aspects. First, the size of the firm is significantly positively related to the students' job satisfaction. Therefore, universities should seek to make more contracts for cooperative accounting education programs with larger and more international companies. This will provide the students with better learning experiences and higher satisfaction with the work placements, which in turn might lead to higher motivation among the students for

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their studies. Second, when negotiating the contracts with the audit firms the universities should pay attention to secure at least a minimum amount of professional judgmental tasks, which will be assigned to the students, or rather to maximize the number of such tasks since more professional tasks also mean higher job satisfaction and especially more training effect and professional experiences for the students. If the participating students are more satisfied and have more professional skills, it might also help keep and improve the reputation of the universities for their good teaching quality and high professionalism.

This study also has implications for the intern-employers, i.e., the audit firms. The firms should focus on the work aspects. especially the tasks assigned to the interns. The findings of the study implicate that the companies should increase the amount of judgmental professional tasks assigned to the interns and by doing this fully utilize the positive effects of the onthe-job training effect. This will guarantee better-trained graduates with more professional experience and it is these graduates which the companies will hire in the end. Therefore, by increasing the number of professional tasks assigned to the interns the companies help create a highly skilled and more experienced talent pool for the auditing profession.

Limitations and Suggestions for Future Studies

Like all empirical works on new teaching and learning topics, this study has its limits. Firstly, the lack of psychological and educational theories as foundations restricts the width and depth of the investigated relationships among job design, training effects, and job satisfaction for accounting interns. Secondly, the innate weakness of the questionnaire-based methods limits the availability of collecting effective questionnaire responses. Lastly, this study calls for a sophisticated theoretical framework for explaining and predicting the causal effects between training effects and job satisfaction.

Several suggestions are made for future accounting internship studies, based on the awareness of the above-mentioned limitations. Future studies might improve the internal validity by constructing the conceptual framework and research methodologies base on the teaching and learning psychological theories. With the guidance and support of these theories, researchers would also produce more valid questionnaires for experiential learning activities, as well as more reliable measurements for job design, training effects, and job satisfaction.

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Appendix

Questionnaire Items for Measurements:

1. Job Satisfaction

- 1) Overall satisfaction with the work placement arrangement
- 2) Satisfaction with the pay
- 3) Satisfaction with the audit firm leadership
- Satisfaction with the audit firm's policies and principles
- Satisfaction with the interpersonal relationships in the audit firm 5)
- Satisfaction with the work done in the audit firm
- Satisfaction with the internal communication effects in the audit firm 7)

2. Job Design

Tedious work assignments include:

- 1) Office work
- 2) Vouching
- 3) Inventory physical count observations
- 4) Cash physical count observations
- 5) Document stapling
- 6) Footings
- Mailing and receipts of confirmation letters 7)

Professional judgmental assignments include:

- Inquiry of client's management
- Search for relevant business data and policies
- 3) Analytical procedures
- 4) Test of controls
- Tests of transactions
- 6) Tests of detailed account balances
- 7) Discussion of Materiality
- 8) Assessment of audit risks
- 9) Discussion on the audit findings
- 10) Communication with the client management on the audit results

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11) Provision of suggestions in audit report drafting

3. Training Effects

- 1) Technical Skill 1: Audit techniques
- 2) Technical Skill 2: Audit theoretical applications
- 3) Technical Skill 3: Audit software applications
- 4) Technical Skill 4: Processing of complex information
- 5) Social Skill 1: Interpersonal communication
- 6) Social Skill 2: Interpersonal relationships
- 7) Social Skill 3: Team work
- 8) Social Skill 4: Leadership
- 9) Conceptual Skill 1: Logical reasoning and judgment
- 10) Conceptual Skill 2: Problem solving skills
- 11) Conceptual Skill 3: Professional ethics
- 12) Conceptual Skill 4: Perception of the audit profession