OPTIMIZED CRITICAL THINKING

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WHAT IS CRITICAL THINKING?

• Art of analyzing and evaluating thinking with an insight to improving it.
• Using our command of the elements of thinking to dynamically adjust our thinking to the demands and elements of each unique situation.
• Entails effective communication and problem solving abilities.
  ~ A survey corporate executives revealed that the top three characteristics they were looking for in college graduates were “teamwork skills,” “critical thinking and analytic reasoning skills,” and “oral/written communication” skills.
  ~ As the U.S. economy begins to show signs of improvement, executives say they need a workforce fully equipped with skills beyond the basics of reading, writing and arithmetic (the three Rs) in order to grow their businesses. Skills such as critical thinking, communication, collaboration, and creativity (the four Cs) will become even more important to organizations in the future, according to a new survey conducted by American Management Association (AMA).
**What is Systems Thinking?**

- The process of understanding how things influence one another within a whole. In organizations, systems consist of people, structures, and processes that work together to make an organization healthy or unhealthy.
- An approach to problem solving, by viewing "problems" as parts of an overall system, rather than reacting to specific part, outcomes or events and potentially contributing to further development of unintended consequences.
- Focuses on cyclical rather than linear cause and effect.

**Systems Thinking – Fraud Example**

- Fraud Committed at Our Company = Event
- Stop the Fraud and Persecute/Pursue Recovery Methods = Reaction (done nothing to prevent new frauds)
- Respond by stop the fraud and studying where and when the frauds occur = Identifying Patterns (certain areas have more frauds than others)
- Identify more frauds in those areas based on learnings from this fraud = Adapting (Have not done anything to prevent new frauds) HOWEVER
- If we look for the SYSTEMS (e.g. financial pressures, lack of consequences, motivations to commit fraud: things that influence the patterns of fraudulent behavior)
  ~ If we limit access and complete more detailed and continuous background checks and establish actively promote fraud prevention, we are creating change. Finally, we are doing something to prevent new frauds!
**Generic Audit Definition of Critical Thinking**

- Identifying and understanding issues, problems, and opportunities; using data analysis to draw conclusions; using judgment in choosing a course of action; taking action that is consistent with available facts, constraints, and probable consequences.

- **Behaviors:**
  - Makes effective decisions with limited information and takes the initiative when situations are not clear.
  - Makes timely, tough decisions; doesn’t get bogged down in unreasonably detailed analysis.
  - Establishes appropriate criteria before making a recommendation or decision.
  - Evaluates difficult decisions, considering implications and their long-term impact on the organization.
Characteristics of People who Excel at Critical Thinking

• **Truth seeking:** A courageous desire for the best knowledge, even if such knowledge fails to support or undermines one's preconceptions, beliefs or self-interests.

• **Open-mindedness:** Tolerance to divergent views, self-monitoring for possible bias.

• **Analyticity:** Demanding the application of reason and evidence, alert to problematic situations, inclined to anticipate consequences.

• **Systematicity:** Valuing organization, focus and diligence to approach problems of all levels of complexity.

• **Critical Thinking Self-Confidence:** Trusting of one's own reasoning skills and seeing oneself as a good thinker.

• **Inquisitiveness:** Curious and eager to acquire knowledge and learn explanations even when the applications of the knowledge are not immediately apparent.

• **Cognitive Maturity:** Prudence in making, suspending or revising judgment. An awareness that multiple solutions can be acceptable. An appreciation of the need to reach closure even in the absence of complete knowledge.
Six Cognitive Skills

- **Interpretation** - Comprehend and express meaning or significance of wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures or criteria.

- **Analysis** - Identify the intended and actual inferential relationships among statements, questions, concepts, descriptions or other forms of representation intended to express belief, judgment, experiences, reasons, information or opinion.

- **Evaluation** - Assess the credibility of statements or other representations which are accounts or descriptions of a person's perception, experience, situation, judgment, belief or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions or other forms of representation.

- **Inference** - Identify and secure elements needed to draw reasonable conclusions; to form conjectures and hypotheses; to consider relevant information and to educe the consequences flowing from data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions or other forms of representation.

- **Explanation** - State the results of one's reasoning; justify that reasoning in terms of evidential, conceptual, methodological, criteriological and contextual considerations upon which one's results were based; and to present one's reasoning in the form of cogent arguments.

- **Self-regulation** - Self-consciously to monitor one's cognitive activities, the elements used in those activities and the results deduced, particularly by applying skills in analysis and evaluation to one's own inferential judgments with a view toward questions, confirming, validation or correcting either one's reasoning or results.
Figure 1: The Reasoning Progression

**Reasoned Judgment**

- Judgment based on relevant, sound reasoning that goes beyond, and is never to be equated with, fact alone or mere opinion alone.
- Reasoned judgment follows the standards of formal logic and critical thinking.

**Auditor Judgment**

- Drawing audit conclusions and making audit decisions based on a combination of sound logic and firm knowledge of auditing standards and business practices.
Deductive vs. Inductive Reasoning

• Pervasive elements in critical thinking.
• Arguments based on experience or observation are best expressed *inductively*.
• Arguments based on laws or rules are best expressed *deductively*.
• Inductive reasoning usually comes much more naturally to us than deductive reasoning.

Deductive Reasoning

• Reduction rhymes with *deduction*
  ~ Remember that in deduction, you start with a set of possibilities and reduce it until a smaller subset remains.
  ~ A murder mystery is an exercise in deduction.

Inductive Reasoning

• Induction begins with the same two letters as the word *increase*.
  ~ Start with a limited number of observations and increase that number by generalizing.
  ~ For example, suppose you spend the weekend in a small town and the first five people you meet are friendly, so you inductively conclude the following: "Everybody here is so nice." In other words, you started with a small set of examples and you increased it to include a larger set.
1. Identify Existence of Assumptions
   a. What is fact versus fiction?
   b. What is assumed versus known?
2. Assessing their Accuracy and Validity of Assumptions
   a. Do these assumptions make sense?
   b. Do these assumptions fit reality as we understand and live it?
   c. Under what conditions do these assumptions seem to hold true? Under what conditions do they seem false?
3. Consider all Alternatives/Varying Perspectives
4. Informed Action
Utilization of Critical Thinking Throughout the Audit Process

IIA Standards and Critical Thinking

• 1210 – Proficiency
  ~ Internal auditors must possess the knowledge, skills, and other competencies needed to perform their individual responsibilities. The internal audit activity collectively must possess or obtain the knowledge, skills, and other competencies needed to perform its responsibilities.

• Interpretation:
  ~ Knowledge, skills, and other competencies is a collective term that refers to the professional proficiency required of internal auditors to effectively carry out their professional responsibilities.

• 1220 – Due Professional Care
  ~ Internal auditors must apply the care and skill expected of a reasonably prudent and competent internal auditor. Due professional care does not imply infallibility.

• 1220.A1 – Internal auditors must exercise due professional care by considering the:
  ~ Extent of work needed to achieve the engagement’s objectives;
  ~ Relative complexity, materiality, or significance of matters to which assurance procedures are applied;
  ~ Adequacy and effectiveness of governance, risk management, and control processes;
  ~ Probability of significant errors, fraud, or noncompliance; and
  ~ Cost of assurance in relation to potential benefits.
  ~ Auditors and other appropriate professional organizations.
AUDIT RISK ASSESSMENT – HYPOTHESIZED CAUSE/RISK

GROUP EXERCISE #1 – HYPOTHESIZED CAUSE/RISK

• The following condition exists:
  ~ During year-end acknowledgement testing of the IT security policy (full-scope, all employees were asked to respond), the following deficiencies were noted:
    o 22% of the population was not aware of the policy or its existence.
    o 15% were found in non-compliance with current standards (based on self-reporting).
• IA has been asked to perform an audit of the awareness and compliance with IT security policies.
• What could be the hypothesized cause of this problem and what is the risk of a lack of an effective IT security policy?
• Is this induction or deduction?

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BRAINSTORMING STEPS

• When a group of people meet to generate new ideas around a specific area of interest:
  ~ Using rules which remove inhibitions, people are able to think more freely and move into new areas of thought and so create numerous new ideas and solutions
  ~ The participants shout out ideas as they occur to them and then build on the ideas raised by others
  ~ All the ideas are noted down and are not criticized
  ~ Only when the brainstorming session is over are the ideas evaluated
• Brainstorming is a process for generating new ideas
• Builds interpersonal expertise because all members participate
• Quiets the loudest talker and prevents quick solutions
• Develops a skill that is useful in project management

**EXERCISE #2 – BRAINSTORMING: THE 10-MINUTE AUDIT**

• Take two post-it notes each.
• Write one audit/business word (nouns, verbs adverbs only) on each post-it note.
• Stick your post-it notes to a wall surface so that when everyone has completed the task the surface has a random mix of audit/business-related nouns and verbs.
• Each team selects one person to go to the front of the room to select two different words (not the two words from the same participant).
• Each team now has ten minutes to devise the audit objective for a combination of the two words (Ex. “Fraud Substantive” or “Substantive Fraud”). The group should be able to communicate the objective of the audit and how their audit works.

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**Avoiding Groupthink**

• Explore different scenarios.
• Encourage each member of the team to be a critical evaluator, allowing them to openly question ideas and propose alternatives.
• Leaders should deliberately not express their opinion when asking a group to find a solution to a problem.
• Invite outside experts into the meeting and take their opinions seriously. Allow the group members to speak with the experts individually and privately if they desire.
• If the decision is major enough, instruct several different groups to solve the same problem simultaneously but independently of each other.
• Assign at least one group member to deliberately play the role of devil’s advocate.

**Preliminary Work – Defining Audit Objectives**

**IIA Standards – Audit Objectives**

- **2210 – Engagement Objectives**
  ~ Objectives must be established for each engagement.
- **2200 – Engagement Planning**
  ~ Internal auditors must develop and document a plan for each engagement, including the engagement’s objectives, scope, timing, and resource allocations.

**Defining Audit Obj. – Purchasing Process (Group Exercise #3)**

- We are performing recurring audit of purchasing process of an acquisition that was completed last year. We have rolled forward the objectives from prior year’s audit (first time through audit). Based on this document, are there other objectives we can add to the audit for this year?
- Prior year audit focused on more of a general overview and compliance with rules and regulations and internal policies and procedures.
- **Areas of focus included:**
  ~ Compliance with Applicable Laws and Regulations/Internal Policy
  ~ Reconciliations and Timely Recording
- In general, what should be the audit objectives of an audit of the purchasing process?
• Are we inducing or deducing audit objectives?

Prior Year Audit Objectives

• The primary responsibility of the Purchasing Department is to provide for the purchase of materials, supplies, and services, with the objective that they will be available at the proper time, in the proper place, in quantity, quality and price consistent with the needs of the Company.
• Determine that reconciliations are properly completed on a recurring basis for all balance sheet accounts.
• Determine that relevant purchasing documentation is adequate and in compliance with company policy and regulatory requirements.
• Determine that management's policies and procedures are followed for adding vendors.
PRELIMINARY WORK - INITIAL SURVEY (GROUP EXERCISE #4)

• You are beginning the preliminary work on an audit of purchasing. Based on water cooler talk, you know that they have a new system of record and a new purchasing manager.

• You are creating an audit survey/questions to ask purchasing:
  ~ Please list all documents/discussion you would review/have to assist in developing the preliminary survey.
  ~ Please list all questions you would start with.

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Optimized Critical Thinking - Danny M. Goldberg (dgoldberg@sunera.com)
SUFFICIENCY OF AUDIT EVIDENCE

Audit evidence is an integral part of every internal auditing engagement. There are six types of internal auditing evidence.

- **Physical Evidence** – observing people, property, and events
- **Testimonial Evidence** – letters or statements with support or documentation
- **Documentary Evidence** – External letters, papers, documents, invoices, contracts, confirmations from outside sources: contractors, vendors, customers, etc.
- **Internal Evidence** – Originating within the client organization: job tickets, payroll records, invoices, etc.
- **External Evidence** – Originating outside of the client organization: vendor invoices, bank statements, etc.
- **Analytical Evidence** – Computations resulting from analysis and verification

There are also qualitative standards of internal auditing evidence

- **Sufficiency** – So factual, adequate and convincing that it would lead a prudent person to the same conclusion as the auditor.
- **Competence/Reliable** – the best obtainable reasonably.
- **Relevance** – a close relationship to its use. The facts and opinions have a logical sensible relationship to the issue.

GROUP EXERCISE #5 – AUDIT EVIDENCE

**Scenario A**

- We are performing preliminary work on an operational audit and during one of our interviews, the A/P Clerk states that one of her team members has been taking money for the last few months. When we asked how widespread it is, she states “That man has walked around this office like he owns it! He spends money like it is going out of style; he is a real jerk!”
  ~ How should we handle this comment?
  ~ What are our next steps?
Scenario B

• During the audit, out of a total sample of 27 A/P voucher packages, the receiving documents given to us are all original documents, with the exception of 3, which appear to be hastily copied. Can we utilize these as part of our sample?

AUDIT WORKPAPERS

Workpaper Considerations

• Due to the significant variety of internal audit engagements and related workpapers, assessing the adequacy of audit documentation often can be difficult. NOTE: This is where Critical Thinking Comes Into Play!
• The specific audit procedures performed can result in different documentation requirements.
• For example, if the engagement involves a review of sensitive payroll information, the auditor likely would not be able to retain example information and instead would have to create a detailed memo explaining the procedures performed.
• The amount of auditor judgment used to determine any observations also will impact documentation requirements.
• Any assumptions, inferences, or other uses of judgment will need to be documented clearly and reviewed by appropriate levels of internal audit management.

• Finally, the quantity and severity of exceptions noted will require varying degrees of audit documentation. If there are no exceptions, one thorough walk-through example of procedures performed likely would suffice (if the area is low risk). However, if multiple significant exceptions are noted, internal auditors likely would need to obtain all related source documentation and provide detailed explanations for each exception.

• Keeping these considerations in mind, internal auditors always should try to adhere to any standard in-house work paper styles and templates.

• Exercise caution when relying on prior year workpapers, as the documentation may not meet current quality standards (AND MIGHT NOT BE ANY GOOD!)

• Careful consideration of key audit work paper characteristics and essential elements will improve the quality of audit documentation and reflect on the audit project itself.

Four Essential Workpaper Characteristics

• COMPLETENESS
  ~ Each work paper should be completely self-standing and self-explanatory.
  ~ If a work paper is separated from the engagement file, readers should be able to ascertain the purpose, work performed, and results based solely on information included on that single work paper.
  ~ One key to achieving complete workpapers is to prepare audit documentation timely.

• ACCURACY
  ~ High-quality workpapers include statements and computations that are accurate and technically correct.
  ~ Errors included in final workpapers certainly will shed doubt on the procedures performed and results noted from an internal or external review perspective.
Auditors should also clearly differentiate statements based on facts from those based on inquiry or matters of judgment.

**ORGANIZATION**
- Workpapers should be arranged logically and cross-referenced from source documentation to test grids and audit work steps.
- The cross-referencing should extend to an issue summary that links to the audit report, thus clearly communicating the derivation of audit observations.

**RELEVANCE & CONCISENESS**
- Audit workpapers and items included on each work paper should be relevant to meeting the applicable audit objective.
- Writing concise notes and removing unnecessary pages of bulky policies will also help improve the efficiency of review and ultimately the quality of the documentation.

**EXERCISE #6 – WORKPAPER REVIEW**
- One of the workprogram steps the staff has performed is a test of appropriate approval and support of travel and entertainment expenses.
- The staff tested a sample of 30 expenses and documented 7 issues. The 7 issues were as follows:
  - 4 were not approved in a timely manner. (all were less than $500)
  - 1 expense was duplicated and approved and paid twice ($25)
  - 1 expense review was not dated ($5,000)
  - 1 expense was paid but was not in accordance with company policy ($4,500)
- The auditor did not take additional steps on the findings above.
- As the Senior on the engagement, are there any additional steps you would recommend being completed and are these significant issues?
EVALUATING THE SIGNIFICANCE OF FINDINGS (GROUP EXERCISE #7)

- Is this finding significant?
- 25 expense reports were selected to review
- Audit Step: Verify all were filed in accordance with company policy and within current limitations and standards.
- Results: 1 of the sample selected (below) had numerous charges (see attached for detail) that were not appropriately supported by receipts
  - 1 expense report had duplicate descriptions and totaled exactly $.01 under the dollar amount necessary for additional approval.

<table>
<thead>
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<th>Name</th>
<th>ID #</th>
<th>Date</th>
<th>Amount</th>
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<tr>
<td>Jim Scott</td>
<td>2614</td>
<td>4/12/09</td>
<td>999.99</td>
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<tr>
<td>- Dinner</td>
<td></td>
<td>4/8/09</td>
<td>75.74</td>
</tr>
<tr>
<td>- Yankee Tickets</td>
<td></td>
<td>4/7/09</td>
<td>209.38</td>
</tr>
<tr>
<td>- Dinner</td>
<td></td>
<td>4/8/09</td>
<td>138.92</td>
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WRITING EFFECTIVE AUDIT REPORTS (GROUP EXERCISE #8)

Minor Control Deficiency – ABC regions never consistently performs a quality review on each employee who set-up new vendors.

A. Finding / Root Cause – 2 (Florida and Indiana) of the 4 ABC regions did not perform a quality review on each employee who set-up new vendors. Per ABC procedures, a quality review of a sample new vendor set-ups will be performed by ABC Managers on a monthly basis for each processor.

B. Risk Assessment - Processing errors which go undetected may lead to negative customer impact and/or loss to the Company.

C. Recommendation – We recommends the National ABC Manager must review the Quality Review procedures with the Regional ABC Managers. Quality review results should be sent to the National ABC Manager upon completion each month for her review.

D. Management Response – ABC Management has reiterated to ABC Regional Managers the wording in the quality review procedures require including each processor. CART Regional Managers must perform 100% quality review of new vendor set-ups, so all Processors with new vendor activity during the month will be reviewed. Due to the volume of collateral releases, a 100% review is not practical.
Danny M. Goldberg, Partner - Professional Development

Danny M. Goldberg leads the Professional Development Practice at Sunera. Prior to joining Sunera in January 2011, Danny founded SOFT GRC, an advisory services and professional development firm. Danny has over 15 years of audit experience, including five as a CAE/Audit Director at two diverse companies.

Prior to founding SOFT GRC, Danny was the Director of SOX Compliance and Corporate Audit at Dr Pepper Snapple Group, where he led the Year One SOX Compliance efforts. Prior to his tenure at Dr Pepper, Danny was the Chief Audit Executive at Tyler Technologies, a publicly traded technology company (Danny was hired to build the department from the ground up).

Danny has served on the audit committee of the Dallas Independent School District and as the Chairman of the North Texas Leadership Council of the American Lung Association. Danny is also the IIA Dallas Chapter Programs Committee Co-Chairman for the 2012-2013 year.

Danny is accredited as the professional commentator on the publication BNA Tax and Accounting Portfolio, Internal Auditing: Fundamental Principles (Accounting Policy and Practice Series), which is authored by renowned audit scholars Curtis C. Verschoor and Mort A. Dittenhofer – co-author of Sawyer’s Internal Auditing. He is currently leading a project team that has been commissioned by the IIA Research Foundation to write a publication on Crucial Communications: Tools When the Stakes are High.

He has also published numerous articles in trade magazines, including:

- ISACA Journal (The Importance of the ARA, Volume 4, 2012)
- The Audit Report (Executive Search: Knowing the Company is as Important as Knowing the Candidate, December 2011)
- ISACA Journal (General Auditing for the IT Auditor: An Overview, Volume 3, 2011)
- The Audit Report (11 Hot Topics for 2011, March 2011)
- Dallas Business Journal (The Yes Man Phenomenon, January 2011)

Danny is a well-known speaker across the nation at numerous IIA and ISACA sponsored events. Mr. Goldberg has been recognized as a top speaker at numerous events over the past years, including:

- Ranked 8th out of 120 speakers (average rankings for all categories) – 2012 IIA International Conference
- “Top Rated” (Excellent/Outstanding) Speaker – 20th Annual American Society for Quality (ASQ) Audit Division Conference (out of 44 presenters)
- Top 10 Presentation – 2011 IIA Midwest Regional (36 total concurrent sessions, 3.75 overall rating out of 4.0)
- Top 3 Ranked Speaker – Michigan CPA’s Healthcare Conference 2011 (29 total speakers)
- Top 3 Ranked Speaker – ArkSarBen IIA 2011 District Conference (24 total sessions)
- 3.58/4.00 Rating – 2011 ACFE Annual North American Conference