A Practical Flowcharts Approach for Educating the Auditor’s Opinion

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Abstract

The economic world needs the opinion of the experienced auditor for adequately reasoning on the world of business, financial affairs, and international trade. The auditor’s opinion on financial statements is a key element in our economic world. The composition of such an opinion is a difficult task which has to be learned over the years. Experience is a good instructor in this respect. So, education guided by experience may be expected to be productive. For instance, new auditors need extensive training before starting with their profession. Experienced auditors or skilled professors may do the task. In training or educating sessions they may use flowcharts to support their lectures. This paper aims at developing practical flowcharts to help educating the formulation of the auditor’s opinion in a short period. The main research questions are: (1) what auditing judgments should an auditor make to formulate his opinion on financial statements? and (2) how can the auditing judgments be constructed and developed in practical flowcharts? To answer these questions adequate field work was performed. From the validation process the researcher may provisionally conclude that using flowcharts is an effective instrument to improve the training and education process of auditing.
1. Introduction

The economic world needs the opinion of experienced auditor for adequately reasoning on the world of business, financial affairs, and international trade. Therefore, the position of an experienced auditor is very important for the business society. He takes care of the checks and balances in the national and international activities of the business firm, the bonds, and the public offices. The composition of the auditor’s opinion on financial statements is a complicated task which has to be learned over the years. Therefore, an auditor should be skilled and trained in formulating an auditor’s opinion.

All users of financial statements rely upon the auditor’s opinion in decision-making concerning a company. International efforts to harmonize the auditor’s report are of utmost importance. In 2002, the IFAC issued the International Standards on Auditing (ISA) 700 “The auditor’s Report on Financial Statements”. The ISA 700 requires the auditor to express an opinion on whether the financial statements give a fair view of the financial position of the company (IFAC, 2010). The ISA 700 also describes five types of the auditor’s opinion that can be expressed by an auditor. Currently, it is the standard that IFAC members are expected to follow, as it best meets the needs of the international users of financial statements (Gangolly, Hussein, Seow, & Tam, 2002; IFAC, 2010).

The purpose of this paper is developing practical flowcharts to (1) facilitate training by professors and experienced auditors in formulating the auditor’s opinion, (2) facilitate the learning process of students in formulating the auditor’s opinion, and (3) improve the training methods themselves (a pedagogy element). Of course, the knowledge in the flowcharts should be in accordance with ISA and with common practice. The training materials should focus on the auditing judgments (assessments) and relevant procedures that help in formulating the auditor’s opinion. Two main research questions examined in this paper are: (1) what auditing judgments should an auditor make to formulate his opinion on financial statements? and (2) how can the auditing judgments be constructed and developed in practical flowcharts?

In the international literature there are quite a few articles dealing with the methods applied in the teaching of accounting and auditing (cf. Bruton & Bradely, 1992; Bouwman & Knok-Quinn, 1995; White, 1995; Smith & McDuffie, 1996; Groomer & Heintz, 1999; Albrecht & Sack, 2001;
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Mathews, 2001; Burnett, 2003; McDuffie & Smith, 2006; Cruz & Vik, 2007; IFAC, 2009). The auditing courses have two aspects: (1) the theory and (2) the practice (Bruton & Bradely, 1992). The textbooks can be used for teaching the auditing theory. However, teaching the practice of auditing needs textbooks as well as other tools such as decision aids, simulations, and/or practical flowcharts.

Groomer and Heintz (1999) were the first to propose the use of flowcharts in teaching students many types of auditor's reports. However, they based their course materials only on the changes in some Statements of Auditing Standards (SAS) (in particular SAS No. 79 and SAS No. 82) and ignored the ISA as well as the common practice. The researcher believe that the knowledge required to build adequate practical flowcharts should be acquired not only from GAAS (SAS) and ISA, but also from the literature (auditing textbooks and articles) as well as from experienced auditors through a questionnaire and interviews.

The knowledge required to construct practical flowcharts was acquired from two types of data sources. First, the literature (textbooks) was thoroughly perused. Some of them are mentioned here: Navady, 2001; Messier, 2000; Delaney, Nach, Epstein, & Badax, 2003; Whittington & Pany, 2003; PCAOB, 2003; Guy, Carmichael, & Lach, 2004; Hayes, Dassen, Schilder, & Wallage, 2005; IFAC, 2010; Boynton & Johnson, 2010; Elder, Beasley & Arens, 2010. Second, data was acquired from other data sources; they can be considered as sources that are up to date by its nature. These sources are academic materials, periodicals, and company’s reports concerning the formulation of the auditor’s opinion. In the development stage of the practical flowcharts, knowledge was elicited from experienced auditors using questionnaires as well as unstructured and structured interviews. The practical flowcharts developed in this paper have their origins in both, i.e., theoretical and practical settings. They are used for teaching purposes. The practical flowcharts can be used by researchers, professors, and audit firms to develop teaching methods, auditing software, and/or decision aids to help (1) formulating the auditor’s report, (2) educating the students, and (3) training the novice auditors.

The aim is to educate students to a qualified level and the researcher believe that the use of practical flowcharts (abbreviated as PFs) will help the education process in many ways. We mention six of them.

1. PFs will properly encode and arrange (according to the priorities of the auditing procedures) all the knowledge associated with the auditor’s
opinion on financial statements; it organizes personal judgments and improves decision consensus and audit quality.

2. PFs will improve the education in such away that the auditor’s opinion on financial statements complies with the ISA and the practical auditing settings (which differ from country to country).

3. PFs may support the training of students and novice auditors. It will provide them with structured knowledge on the formulation of their opinion on financial statements.

4. PFs may help reduce the time required for students and new auditors to learn how they can formulate their opinion on financial statements.

5. PFs can be considered as an efficient technique being more readily and understandable than other techniques, such as textbooks, narratives, questionnaire lists, and tabular presentations (cf. Groomer and Heintz, 1999).

6. PFs can be considered as a foundation to design software such as knowledge-based system to help students and new auditors formulate their opinion on financial statements and to support the experienced auditors as a second opinion (cf. Wahdan, 2006).

The conceptual model of PFs focuses on the final phase of the audit process. This phase consists of four activities: (1) accumulating final audit evidence, (2) reviewing the subsequent events that have happened after the year-end, (3) evaluating the auditor’s findings, and (4) issuing the auditor’s report (cf. Elder et al., 2010). In this phase the conceptual model should also (a) test the completeness of the prior auditing phases according to ISA (see activity 1) and (b) collect all results of the phases (see activities 2 and 3) in advance to formulate the opinion on the financial statements (see activity 4). The full model consists of five submodels that directly lead to the structure of our approach using practical flowcharts (as presented in section 3).

The outline of the paper is as follows. Section 2 deals with the research methodology. Section 3 presents the conceptual model that consists of eleven PFs that are the results of our five submodels. Section 4 provides the main conclusion and points at the future work.

2. The Research Methodology

To achieve the research goal, a research methodology was developed consisting of six phases: (1) reviewing the literature, (2) designing a questionnaire (Appendix 1), (3) validating the opinion, (4) designing the flowcharts, (5) revision of the flowcharts, and (6) applying the flowcharts in
a test environment (not described in this paper). In this research, 32 experienced auditors in seventeen audit firms in Egypt participated in the survey (note: several international audit firms are included and two auditors are from the Central Auditing Organization in Egypt). They cooperated with the researcher in exploring the auditing tasks to a large extent, in so far as they are required to formulate the auditor's opinion on financial statements. Below the six phases are described in more details.

1. A thorough literature review was performed for acquiring knowledge to formulate the auditor's report.
2. The questionnaire coupled with in-depth interviews was used to elicit the knowledge from 32 experienced auditors in audit firms; the knowledge that the researcher would like to capture focused on how the auditor performs the task of formulating the opinion on financial statements in practice.
3. The acquired knowledge was validated by letting the auditors review the results of the knowledge-acquisition process. Disagreements among auditors were solved. A sample of experienced auditors was chosen to decrease the disagreements among the auditor’s points of view. The interviews were done with them individually. Then, if there was still any disagreement, the leading expert made a final decision.
4. PFs were constructed based upon the knowledge collected and elicited in the three phases above. It may happen that there are more questions in one box (see, e.g. Figure 3, Submodel 2). This means that if the answers of all questions in the box are yes, we will follow the normal direction will be followed, if one answer is no, the other direction will be followed.
5. Revision of the PFs was carried out by the auditors (academic and practitioners) to check the validation of the PFs as a tool for educating the formulation of the auditor’s opinion.
6. Based upon the results of the revision and validation process in step 5, PFs were enhanced in some respects. Finally, findings, conclusions, and suggestions for future research were established.

Below phase no. 2 was clarified, in order to answer the first research question: what audit judgments should an auditor make to formulate his opinion on financial statements? The questionnaire consisted mainly of questions requiring a response on a five-point Likert-scale (always, often,
sometimes, rarely, never). The revised questionnaire was divided into four parts (based upon preliminary interviews), each covering one submodel of the proposed flowcharts. Furthermore, when performing structured interviews, the questionnaires were sent to auditors before the interviews. The five main domains of questions that cover the procedures required to assess the five audit settings are presented below (most of the detailed questions and procedures, which have a high weighted means are presented in practical flowcharts) (Wahdan, Ali & Van den Herik, 2009).

1. What do the audit procedures require to issue the proper auditor’s opinion on financial statements based on the outputs of all models? In addition, how can auditors assess the materiality of (i) an intended scope restriction, (ii) a non-compliance with accounting principles, (iii) an unfair representation, and (iv) a going-concern uncertainty?

2. What do the audit procedures require to assess whether auditors have collected adequate evidence required to complete the audit process, and whether an audit complies with ISA?

3. What do the audit procedures require to assess whether financial statements are prepared in accordance with the accounting principles?

4. What do the audit procedures require to assess whether financial statements are fairly presented?

5. What do the audit procedures require to assess whether the company has the ability to continue as a going concern and whether management plans are effective?

The findings of the survey are integrated in the practical flowcharts; they are reviewed, and presented in section 3.

3. The Conceptual Model for PFs

Figure 1 illustrates the conceptual model of using practical flowcharts (PFs). Submodel 1 of the auditor’s opinion is considered as the output of the other four submodels. The other submodels are (2) the auditing standards, (3) the accounting principles, (4) the fairness of presentation, and (5) the going concern.
3.1 The Submodel of the Auditor’s Opinion

The purpose of the submodel of the auditor’s opinion is to help students to learn (and professors to teach) how the proper auditor’s opinion can be formulated according to the output of all submodels. The researcher remarks that the submodel of the auditor’s opinion is supported by four model procedures (abbreviated as MP): (MP 1a) tests the auditor’s independence, after that (MP 1b) compares the result with the work of another auditor, then (MP 1c) focuses on the materiality of the auditor’s findings of all models, and finally (MP 1d) formulates the auditor’s opinion. With all knowledge given Figure 2 illustrates submodel 1 of the auditor’s opinion.

Figure 1: The conceptual model for PFS
Figure 2: Submodel 1: The auditor’s opinion
3.1.1 The auditor’s independence (MP 1a)

Auditors might not provide value by adding to the reliability and credibility of financial statements if their independence is impaired (Hudaib & Haniffa, 2005). The auditor should be independent in the mental attitude. Without auditor independence, the audit process cannot be completed in accordance with auditing standards, so a disclaimer of opinion is required (Lousteau & Ried, 2003). Based on the survey, the auditor’s independence may be affected by four distinct issues: (1) the requirements imposed on the auditor qualifications to perform the audit, (2) the rules of how to appoint and change an auditor, (3) the assessment of the audit fee, and (4) the separation of the audit service and other services offered by the auditor to auditee (Sobhey, 2001). The upper part of Figure 2 (submodel 1) illustrates the test of the auditor’s independence (major question) and the answer of the major question can be obtained from MP 1a (available from the author).

3.1.2 The work of another auditor (MP 1b)

The auditor should determine how the work of another auditor would affect the audit (ISA 600). According to IFAC (2010), the principal auditor would consider three factors: (1) the materiality of the portion of the financial statements audited by another auditor, (2) the principal auditor’s degree of knowledge regarding the business of the portion involved, and (3) the risk of material misstatements in the financial statements of the portion audited by the other auditor.

The principal auditor should obtain sufficient evidence that the work of the other auditor is adequate for the principal auditor’s purposes in the context of the specific engagement. He should assess the significant findings of the other auditor. When the principal auditor concludes that (1) the work of the other auditor is unreliable and (2) the principal auditor himself cannot perform additional procedures regarding the audit, a qualified opinion or disclaimer of opinion should be formulated because of the presence of a scope restriction of the audit (IFAC, 2010) (see MP 1b after MP 1a in the upper part of Figure 2).

3.1.3 The materiality of the auditor’s findings (MP 1c)

In the audit planning, the auditor selects a proper materiality base and assesses the preliminary materiality. Here the researcher deals with 2 MPs: (1) assessing the materiality of the scope restriction (Mp 1c1), and (2) non-compliance with accounting principles together with unfair representation during the phase of evaluating the auditor’s findings (Mp 1c2).
Scope restrictions (MP 1c1)
The materiality judgements of scope restrictions are influenced by (1) whether the auditee imposes the scope restrictions, and (2) whether the unavailable information (2a) affects the market reaction, (2b) conceals an illegal act, (2c) relates to management judgements, (2d) relates to suspense accounts, (2e) relates to related party transactions, (2f) relates to large accounts size, and/or (2g) has pervasive effects (Gist & Shastri, 2003). MP 1c1 provides the answer of the general question of Figure 2 (MP 1c1 is available from the author).

Non-compliance and unfair representation (MP 1c2)
In fact, the auditing literature provides number of rules of thumb for materiality, which form a quantitative threshold. For example, misstatements that are less than 5 percent of the income from continuing operations [or less than a preliminary materiality (PM)] are immaterial, while misstatements that are greater than 10 percent of the income from continuing operations (or greater than PM) are material. The materiality of misstatements in the intermediate range depends on the specific factors, in particular qualitative factors (Vorhies, 2005). MP 1c2 provides these factors that include whether misstatements reflect a failure to meet regulatory requirements, relate to the management’ compensations, conceal unlawful transactions, reflect a failure to comply with loan covenants, and/or change a loss into income or vice versa (Gist & Shastri, 2003; Elder et al., 2010) (MP 1c2 is available from the author).

3.1.4 Formulating the auditor’s opinion (MP 1d)
According to the ISA, the auditor should provide a clear opinion as to whether the financial statements (1) comply with the statutory requirements (submodel 2), (2) are prepared in accordance with the accounting principles (submodel 3), (3) are fairly presented in all material respects (submodel 4), and (4) are not affected by going-concern uncertainties (submodel 5). There are five outcomes of the auditor’s opinion: an unqualified opinion, an unqualified opinion with an explanatory paragraph, a qualified opinion, a disclaimer of opinion, and an adverse opinion. The lower part in Figure 2 illustrates the types of the auditor’s opinion (MP 1d).

3.2 The Submodel of the Auditing Standards
The purpose of the submodel of the auditing standards is to help students learn (and professors to teach) how can they check whether the auditors collect the required evidence and carry out the audit in accordance with the ISA. Figure 3 illustrates submodel 2 of the auditing standards.
1. Does the auditor examine the evidence to support the FS amounts and disclosure? MP 2a

1. Is the nature of ST performed related to the level of PDR? And 2. Is the timing ST related to the level of PDR? And 3. Is the extent of ST performed related to the level of PDR? And 4. Could analytical procedures support the assessed level of PDR?

Disagree with at least one

Has the auditor been imposed scope restrictions while collecting evidences?

Does the audittee impose any scope restrictions on the auditor?

Are the collected evidences sufficient as a basis for an opinion on the FS?

Audit is in compliance with ISA and auditors have gathered auditing evidences

Audit is not in compliance with ISA and auditors have not gathered auditing evidences

ST: Substantive tests

Figure 3. Submodel 2: The auditing standards
3.2.1 Disclosure and audit evidence (MP 2a)

According to IFAC (2010), the auditors can obtain audit evidence using one or more of the following seven procedures: inspection, observation, inquiry, confirmation, computation, reperformance, and/or analytical procedures.

The auditors should check the existence, the completeness, the accuracy, and the ownership of the recorded assets, as well as the posting and summarisation of assets and transactions, and the presentation and disclosure of assets (PCAOB, 2003) (these tests are presented in MP 2a, which is available from the author).

3.2.2 Performing the substantive procedures

The auditors should carry out the substantive procedures and collect evidence based on the level of planned detection risk (PDR). Substantive procedures contain two types: (1) tests of details of transactions and balances and (2) analytical procedures. Audit evidence can be obtained from tests of controls, substantive procedures or an appropriate mix of them (IFAC, 2010). The auditor may examine a representative sample of the transactions using judgemental or statistical sampling procedures to be able to formulate his opinion (Elder et al., 2010).

3.2.3 A scope restriction

When the auditors have a doubt as to a material financial statement assertion, they attempt to obtain sufficient audit evidence to remove such a doubt. If the auditors believe that the financial statements are affected by fraud, and they are unable to collect sufficient evidence to conclude the magnitude, this inability is considered a scope restriction. The proper response of a scope restriction is to issue a qualified opinion or disclaimer of opinion, based on the materiality of other scope restrictions (Hermanson, Strawser, & Strawser, 1993).

3.3 The Submodel of the Accounting Principles

The purpose of the submodel of the accounting principles is to help students learn (and professors to teach) how can auditors test whether financial statements are prepared in accordance with the accounting principles as required by ISA (Grusd & Schuldiner, 1998). Figure 4 illustrates the submodel 3 of accounting principles.
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1. Does the client consistently apply AP from year to year?
   - Yes
   - No

   1. Have the AAP been got general acceptance? And 2. Are the effects of changes in AAP properly disclosed? And 3. Is the method of accounting for the effect of the changes complying with AP? And 4. Are the changes in AAP justified by management? And 5. Are the AAP appropriate to industry or company’s circumstances?
   - Agree with all
   - Disagree with at least one

1. Do FS include adequate disclosure of the AP applied by company? And 2. Are subsequent events disclosed in the FS related to proper period? And 3. Are subsequent events properly modified in the FS related to proper period?
   - Agree with all
   - Disagree with at least one

   1. Has the auditee departed from AP in preparing the FS?
   - Yes
   - No

   Does the lack of prior factor indicate non-compliance with AP?
   - Yes
   - No

   Does the auditor agree with management that FS are presented according to AP?
   - Yes
   - No

   FS are prepared in accordance with AP
   FS are not prepared in accordance with AP

AP: Accounting Principles   AAP: Adapted Accounting Principles

Figure 4. Submodel 3: The accounting principles

3.3.1 Disclosure of the accounting principles

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Disclosure is associated with an accounting-policies footnote that particularly states whether the financial statements are prepared in accordance with IAS. The auditor’s opinion should state whether accounting principles were applied when carrying out the audit (Street & Gray, 2002). Adequate disclosure should be achieved in the footnotes when information in the financial statements is inadequate to achieve that objective.

3.3.2 Inconsistency

When management has selected a specific accounting method, the auditor evaluates whether the company has consistently applied this method. A change of the accounting principle to a more favoured method is acceptable, if the change and its effect are disclosed (Elder et al., 2010). If an inconsistency in the accounting principles exists, the auditor should evaluate whether: (1) management has appropriately applied the criteria provided in the accounting principles to support the selected method and (2) the accounting method is appropriate for the company’s business, industry, and environment.

3.3.3 Subsequent events

According to ISA 560, the auditor should obtain sufficient evidence that subsequent events have been identified, accounted for, and disclosed. The procedures to identify subsequent events would be performed as near as practicable to the date of the auditor’s report. The auditor should consider the effect of the subsequent events on both the financial statements and his opinion (Hermanson et al., 1993).

3.3.4 Departure from accounting principles

If the change in accounting principles is not properly accounted for, or management does not provide an adequate justification for the change, it will be considered as a departure from the accounting principles (Groomer & Heintz, 1999).

3.4 The Submodel of Fairness of Presentation

The submodel of fairness of presentation is to help students learn (and professors to teach) how can auditors test the fair presentation of the financial statements. An audit includes reviewing the significant estimates made by management and the overall financial-statements presentation. Figure 5 illustrates submodel 4 of fairness of presentation.
Does the balance sheet fairly present financial position at the end of the year?

No

Yes

Do the other statements fairly present financial position at the end of the year?

No

Yes

1. Does the accounting system comply with the act? And 2. Are the provisions in the FS complying with law? And 3. Are not there illegal acts and/or fraud?

Disagree with at least one

Agree with all

1. Does the company maintain accounting records for branches not visited? And 2. Are the directors’ compensations and other related transactions in compliance with act? And 3. Are the fair value and disclosure in compliance with AP? And 4. Are the significant estimates and judgements made by the directors reasonable?

Disagree with at least one

Agree with all

FS are fairly represented

FS are not fairly represented

Figure 5. Submodel 4: The fairness of Presentation
3.4.1 Financial-statements presentation

According to ISA 315, the auditors are responsible for identifying various types of material misstatements in the financial statements, including errors, irregularities, and those caused by illegal acts (IFAC, 2010) (see Figures 5).

The auditors can review a representative sample of the accounts to ascertain the fairness of the representation (such as the assets’ existence, completeness, accuracy, posting & summarization, valuation, and presentation & disclosure (Elder et al., 2010)). If the findings of the sample do not support that the financial statements are fairly presented, the auditors should enlarge the sample size. If the financial statements are fairly presented, the auditors will conclude that information presented in the financial statements gives a fair view as a whole.

3.4.2 Accounting estimates

According to ISA 540, the auditors should assess the fairness of the estimates based on their experience with the business involved and whether the estimates are consistent with other accumulated audit evidence (Floch & Olson, 2003).

3.4.3 Fair values and disclosures

According to ISA 545, the auditor should evaluate and obtain evidence whether the fair value measurements and the disclosures in the financial statements comply with the applied accounting principles (IFAC, 2010).

3.5 The Submodel of the Going Concern

The purpose of the submodel of going concern is to help students learn (and professors to teach) how can auditors test the company’s ability to continue as a going concern. The auditor’s opinion with a going-concern opinion affects the capital-raising activities and the market value of stocks (Willenborg & McKeown, 2000). In fact, the going-concern opinion depends on understanding the auditee’s business and evaluating the management’s plans (Arnold, Collier, Leech & Sutton, 2001). Figure 6 illustrates the submodel 5 of the going concern.
Figure 6. Submodel 5: The going concern

3.5.1 Recognizing the going-concern uncertainties

1. Is there any doubt concerning a going concern? MP 5a
   And 2. Does the company face any sort of liquidation problems? And 3. Is the company unable to obtain necessary borrowing facilities or to raise capital?

1. Has going concern uncertainty been accounted for? And 2. Are there mitigating factors indicating the ability to going-concern (new sources of finance, and financial support from other companies)? And 3. Are management plans to solve the problem properly disclosed?

FS are not affected by uncertainties

Yes

No

Disagree with at least one

Agree with all

Disagree with all

Are management plans to solve the problem properly effective? MP 5b

FS are affected by uncertainties
According to ISA 570, if the financial statements were not prepared on a going-concern basis, that fact should have been disclosed, together with the basis of the preparation and justifications of not considering a going-concern basis (IFAC, 2010).

3.5.2 Understanding the causes of going-concern uncertainties (MP 5a)

According to the IFAC (2010), there are some events or conditions, which individually or collectively may cast significant doubt on the going-concern assumption. These events are presented in MP 5a (which is available from the author). These events include whether there are (1) litigation claims against the company, (2) negative cash flow, (3) any withdrawal of financial support, (4) default on loans agreements, (5) liabilities in excess of its assets, (6) substantial operating losses, and/or (7) adverse key financial ratios.

3.5.3 The effectiveness of the management plans (MP 5b)

The going-concern opinion provides useful information to investors and supports the need for the disclosure of the going-concern uncertainties (Citron & Taffler, 2003). Going-concern decisions are associated with the publicly accessible management-plan information. Furthermore, a firm’s liquidity position may affect the auditor’s opinion on management plans (Behn, Kaplan, & Krumwiede, 2001). The auditors should evaluate whether management plans are appropriately effective. MP 5b checks whether management opens new market, reduces unnecessary expenditures, disposes of unused assets, leases assets rather than buys outright, and/or develops alternative sources of credit facilities (MP 5b is available from the author).

3.5.4 Rendering the going-concern opinion

If an adequate disclosure on going-concern uncertainty is made in the financial statements, the auditor should express an unqualified opinion with an explanatory paragraph that highlights the significant doubt on the company’s ability to continue as a going concern. In extreme cases (where multiple significant uncertainties are involved), the auditor may properly prefer to disclaim of opinion instead of adding an explanatory paragraph (IFAC, 2010). If an adequate disclosure is not included in the financial statements, the auditor should formulate a qualified or an adverse opinion based on the materiality of going-concern uncertainties on financial statements (see the lower part in Figure 2).

4. Conclusion and Future Research
This paper describes the development of the practical flowcharts that help educating youngsters in the formulation of the auditor’s opinion. The two main research questions are: (1) what auditing judgments should an auditor make to formulate his opinion on financial statements? and (2) how can the auditing judgments be structured and developed in practical flowcharts? The knowledge was acquired (a) from the literature and (b) from experienced auditors. The researcher successfully designed a conceptual model consisting of five submodels and eleven practical flowcharts. The researcher believe that the conceptual model provides a vital contribution to the literature, and the application of it constitutes a new teaching method of auditing. Here, from the validation process by the respondents and interviewees as well as from a provisional test (not described in this paper), the researcher may conclude that usage of flowcharts is an effective tool to improve the audit education. The practical flowcharts described in this paper are logical, easy to follow, and their results are clearly stated. This lead to the second conclusion, viz that the visual aids, such as practical flowcharts, are a great help for students in understanding the complex work performed by the auditor. Based on these two conclusions the researcher believe that organizing education and training sessions by using the practical flowcharts is an adequate way to prepare students for a successful career in auditing. The future research will deal with the impact of practical flowcharts on the learning process of students and novice auditors first: using test cases and second: using actual auditing cases.

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Appendix 1: Questionnaire

Knowledge elicitation of Practical Flowcharts

The purpose of this questionnaire is to help knowledge elicitation, required to formulate the auditor’s opinion on financial statements, from auditors within audit firms in Egypt. The questionnaire was submitted to auditors. The answers were analysed, before interviews with experts took place, to ensure the effectiveness of the interviews. The questionnaire consists of questions using a five-point Likert scale (Always: 100 %, Often: >75 - < 100 %, Sometimes: >25 - < 75 %, Rarely: >0 % - < 25 %, and Never: 0 %). The questionnaire includes four submodels, as follows: 1. The auditing-standards model 2. The n accounting-standards model 3. The Fairness of representation model 4. The Going-concern model

The purpose of the questions in the first submodel is to check whether the auditor collects required evidence and carries out the audit in accordance with international standards on auditing. The purpose of the questions in the second submodel is to test whether financial statements are prepared in accordance with accounting principles. The purpose of the questions in the third submodel is to test whether there is a disclosure in financial statements and accounting policies are acceptable and applicable. The purpose of the questions in the fourth submodel is to evaluate whether the company has ability to continue as going-concern.

Dear Sir / Mrs

Thank you for your participation in this survey. Please, read each question and click the response that best represents your feelings to that statement. The abbreviation FS stands for “Financial Statements”.

First, Please provide some background information about you.

1- Firm name: 
2- Position within the firm (manager, partner, senior, supervisor): 
3- Qualifications: Bachelor- Master- PhD- CPA

C. Years of auditing experience: [1-4] [>4-7] [>7-10] [>10]
## Model 1: Auditing standards

<table>
<thead>
<tr>
<th>Question</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
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<tbody>
<tr>
<td>In practice, it is important when testing the compliance with auditing standards</td>
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<tr>
<td>1. The auditor examines whether there is evidence to support the financial statements’ amounts and disclosures</td>
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<td>2. When assessing planned detection risk, the auditor considers audit risk, inherent risk, and control risk with using the equation (planned detection risk = audit risk / inherent risk * control risk)</td>
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<td>3. The auditor tests whether the nature of substantive tests of transactions based on the assessed level of planned detection risk</td>
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<td>4. The auditor tests whether the timing of substantive tests of transactions based on the assessed level of planned detection risk</td>
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<td>5. The auditor tests whether the extent of substantive tests of transactions based on the assessed level of planned detection risk</td>
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<td>6. The auditor tests whether the analytical procedures could support the assessed level of planned detection risk</td>
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<td>7. The auditor tests whether the nature of substantive tests of balances of accounts based on the assessed level of planned detection risk</td>
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<td>8. The auditor tests whether the timing of substantive tests of balances of accounts based on the assessed level of planned detection risk</td>
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<td>9. The auditor tests whether the extent of substantive tests of balances of accounts based on the assessed level of planned detection risk</td>
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<td>10. The auditor sometimes faces uncontrollable circumstances imposing scope limitations in collecting evidence</td>
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<td>11. The client sometimes imposes scope limitations on the auditor’s ability to collect evidence</td>
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<tr>
<td>12. When there is a scope limitation, the auditors try to get necessary evidence using alternative procedures</td>
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<td>13. The auditor uses the above steps (from 1-12) to comply with auditing standards and to collect evidence</td>
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## Model 2: Accounting principles

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<thead>
<tr>
<th>Question</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
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</thead>
</table>
| **In practice, it is important when testing the compliance with accounting principles:**
1. The auditor investigates whether FS include adequate disclosure of the accounting principles applied by company |
2. The auditor investigates whether the client consistently applies accounting principles from year to year |
3. The auditor investigates whether any subsequent events are modified in, the FS related to proper period |
4. The auditor investigates whether the subsequent events are properly accounted for and disclosed in the FS related to proper period |
5. The auditor investigates whether the client has changed accounting principles in preparing the FS |
| **In practice, when discovering that the client changed accounting principles:**
6. The auditor investigates whether the accounting principles adapted are generally accepted |
7. The auditor investigates whether the changes in accounting principles adapted are reasonably justified by management. |
8. The auditor investigates whether the accounting policies adapted appropriate to industry or company’s circumstances |
9. The auditor investigates whether the method of accounting adapted for the effect of the changes complies with accounting principles. |
10. The auditor investigates whether the effects of changes in accounting principles adapted are properly disclosed |
11. The auditor investigates whether the effect of the departure from accounting principles is highly material that it makes the FS misstated |
12. The auditor investigates whether a lack of adequate disclosure exists in the FS or the footnotes |
13. The auditor investigates whether the effect of the lack of adequate disclosure is highly material on the FS |
14. The auditor uses the above steps (from 1 to 13) to the test the compliance with accounting principles |
Model 3: Fairness of presentation

<table>
<thead>
<tr>
<th>Question</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
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<tbody>
<tr>
<td><strong>In practice, it is important when testing the extent of fair representation:</strong></td>
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<tr>
<td>1. The auditor investigates whether the FS fairly represent financial position at the end of the year</td>
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<td>2. The auditor investigates whether the FS comply with the act concerned with the form and content of accounts and disclosure requirements</td>
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<td>3. The auditor investigates whether the provisions in the FS complying with the law</td>
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<td>4. The auditor investigates whether illegal acts and fraud are accounted for and disclosed.</td>
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<td>5. The auditor investigates whether non-compliance with the acts is considered material to make the accounts misleading</td>
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<td>6. The auditor investigates whether the company maintains proper accounting records for branches not visited</td>
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<td><strong>When reviewing management’s assessment:</strong></td>
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<td>7. The auditor investigates whether the directors’ compensations and other transactions (borrowing, selling, buying, and contracts) carried out with them are in compliance with act</td>
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<td>8. The auditor investigates whether fair value measurements and disclosure are in accordance with accounting principles</td>
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<td>9. The auditor investigates whether documented information are materially consistent with those presented in the FS</td>
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<td>10. The auditor investigates to what extent the reasonableness of the significant estimates, assumptions and judgments made by the directors is reviewed and disclosed</td>
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<td>11. The auditor investigates the effect of unfairly representation of information on FS</td>
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<td>12. The auditor investigates whether all information presented in the all FS give a fair view as a whole</td>
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<tr>
<td>13. The auditor uses the above steps (from 1-12) to achieve the fairness of representation</td>
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### Model 4: Going-concern

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<tr>
<th>Question</th>
<th>Always</th>
<th>Often</th>
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<th>Rarely</th>
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<tbody>
<tr>
<td><strong>In practice, it is important when determining the problem of going-concern:</strong></td>
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<tr>
<td>1. The auditor investigates whether there is any doubt to continue as a going concern</td>
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<td><strong>Examples of raising doubts include whether there are:</strong></td>
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<td>1.1 Litigation claims</td>
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<td>1.2 Bankrupt prediction indicators</td>
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<td>1.3 Substantial operating losses</td>
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<td>1.4 Withdrawal of financial support</td>
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<td>1.5 Default on loans agreements</td>
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<td>1.6 Restrictions of trade</td>
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<td>1.7 Adverse key financial ratios</td>
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<td>1.8 Losing a permit for work</td>
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<td>1.9 Interest payment in excess of its current income</td>
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<td>2. The auditor investigates whether the company faces any sort of liquidation problems</td>
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<td>3. The auditor investigates whether the company is able to get necessary borrowing facilities or to raise capital</td>
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<td>4. The auditor investigates whether the impact of uncertainty is so material to make the FS misleading</td>
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<td>5. The auditor investigates whether going concern uncertainty has been disclosed</td>
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<td><strong>When specifying the solutions of the going-concern uncertainty 6-8:</strong></td>
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<td>6. The auditor investigates whether there are mitigating factors indicating the ability to going concern</td>
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<td><strong>Mitigating factors include:</strong></td>
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<td>6.1 New sources of finance</td>
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<td>6.2 Financial support from other companies</td>
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<td>7. The auditor investigates whether management plans to solve the problem properly are disclosed (i.e. feasible, realistic, practicable)</td>
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<td><strong>When evaluating the effectiveness of management plans:</strong></td>
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<td>6. The auditor investigates whether the management plans to solve the problem are properly effective</td>
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<td>7. Examples of management plans includes whether there are:</td>
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<td>8.1 New sales markets</td>
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<td>8.2 Leasing assets rather than buy outright</td>
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<td>8.3 Reducing dividends requirements</td>
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<td>8.4 Reducing unnecessary expenditures</td>
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<td>8.5 Alternative sources of credit facilities</td>
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<td>8.6 Reducing the level of operation</td>
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<td>8.7 Getting a professional advice</td>
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<td>8.8 Sales and lease back</td>
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<td>8.9 Disposal of assets</td>
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<tr>
<td>9. Auditor uses the above steps (from 1-8) to test going-concern uncertainties</td>
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