

Introduction to Applied Professional Research

1

LEARNING OBJECTIVES

After completing this chapter, you should understand:

- The importance of research in the daily activities of the professional accountant.
- The definition and nature of professional accounting research.
- The navigation steps to narrow one's research.
- The U.S. Securities and Exchange Commission's view on the importance of research.
- The role of research within a public accounting firm or within an accounting department of a business or governmental entity.
- The basic steps of the research process.
- The importance of critical thinking and effective communication skills.
- The role of data analytics, including AI, in accounting and auditing research.
- The changing role of research on the U.S. Certified Public Accountant (CPA) exam.

Today's accounting professionals, like other professionals, are witnessing a major transformation due to changes in the law, services, and technologies, and an ever-increasing number of professional standards. In the altered accounting and auditing landscape brought about by these dramatic changes, understanding how to perform accounting, auditing, tax, and business research is more important than ever. To develop effective skills in research and analysis, students and professionals need to apply their knowledge of research to everyday practical problems. In addition to accounting, auditing, and tax compliance, accountants are involved in such services as attestation reviews, forensic accounting, fraud examinations, and tax planning. Listening effectively and understanding opposing points of view are also critical skills for accountants, who often must present and defend their views through formal and informal communications. Professional research and communication skills are essential in this environment.

Varying views and interpretations exist as to the meaning of the term *research*. In the accounting profession, research points to what accounting practitioners do as a normal, everyday part of their job. In today's environment, to become proficient in accounting, auditing, and tax research, they must possess the skills required to use various professional databases including AI, which are increasingly available on the web. The professional accountant, whether in public accounting, industry, or government, frequently becomes involved with the investigation and analysis of an accounting, auditing, or tax issue. Resolving these issues requires formulating a clear definition

QUICK FACTS

Accounting research combines the use of accounting theory and existing authoritative accounting literature.

of the problem, using professional databases to search for the relevant authorities, reviewing the authoritative literature, evaluating alternatives, drawing conclusions, and communicating the results. This research process often requires an analysis of very complex and detailed issues, and researching such issues challenges the professional's critical thinking abilities. The professional must therefore possess the expertise to understand the relevant facts and render a professional judgment, even when no single definitive answer or solution exists. In such cases, the researcher applies professional judgment in the development of an answer to the issue or problem at hand.

What Is Research?

Professional accountants conduct applied research primarily related to practice issues. The objective of conducting any type of research, including professional accounting, auditing, and tax research, is a systematic investigation of an issue or problem utilizing the researcher's professional judgment. Here are two cases of generalized research problems that serve as examples of the types of research questions confronting the accounting practitioner:

1. A client is engaged in land sales, primarily commercial and agricultural. The company recently acquired a retail land sales project under an agreement stating that, if the company did not desire to pursue the project, the property could be returned with no liability to the company. After the company invests a considerable amount of money into the project, the state of the economy concerning the market for retail land sales declines, and the company decides to return the land. As a result, the client turns to you, the CPA, and requests the proper accounting treatment of the returned project. An issue is whether the abandonment represents a disposal of a segment of the business, an unusual and nonrecurring extraordinary loss, or an ordinary loss. The client may also want to understand the tax consequences.
2. A controller for a construction contracting company faces a problem. The company pays for rights allowing it to extract a specified volume of landfill from a project for a specified period of time. How should the company classify the payments for such landfill rights in its financial statements?

Research is often classified as either theoretical or applied. Theoretical research investigates questions that appear interesting to the researcher, generally an academician, but that may have little or no current practical application. Theoretical researchers attempt to create new knowledge in a subject area, sometimes using empirical data based on experimentation or observation. For example, a theoretical researcher may conduct a controlled experiment to investigate the hypothesis that the U.S. Securities and Exchange Commission's recommend that firms provide disclosures on quantitative critical accounting estimates impact informed users.² Thus, theoretical research adds to the body of knowledge and may ultimately contribute directly or indirectly to practical problem solutions. Theoretical research using empirical research studies based on experimentation or observation is frequently reviewed and evaluated by standard-setting bodies in drafting authoritative accounting and auditing pronouncements.

Applied research, the focus of this text, investigates an issue of immediate practical importance. One type of applied research is known as a priori (before-the-fact) research, which is conducted before the client actually enters into a transaction. For example, assume that a public accounting firm needs to evaluate a client's proposed new accounting treatment for environmental costs. The client expects an answer within two days on the acceptability of the new method and its impact on the financial statements. In such a case, a member of the accounting firm's

¹ AICPA, *Technical Practice Aids*.

² Glendening, Matthew, Elaine Mauldin, and Kenneth Shaw, "Determinants and Consequences of Quantitative Critical Accounting Estimates Disclosure", *The Accounting Review*, 94, no. 5 (September 2019).

professional staff would investigate to determine whether the authoritative literature addresses the issue. If no authoritative pronouncement exists, the accountant would develop a theoretical justification for or against the new method.

Applied research relating to a completed event is known as a posteriori (after-the-fact) research. For example, a client may request assistance preparing his or her tax return for a transaction that was already executed. Frequently, many advantages accrue to conducting a priori rather than a posteriori research. For example, if research reveals that a proposed transaction will have an unfavorable impact on financial statements, the client can abandon the transaction or possibly restructure it to avoid undesirable consequences. These options are not available, however, after a transaction is completed.

Society needs both theoretical and applied research. Both types of research require sound research design to effectively and efficiently resolve the issue under investigation. No matter how knowledgeable professionals become in any aspect of accounting, auditing, or tax, they will always face research challenges. However, using a systematic research approach will greatly help in resolving the problem.

QUICK FACTS

Professional accountants conduct primarily applied research related to practice issues.

Research Questions

Individual companies and CPA firms conduct research to resolve specific accounting, auditing, and tax issues, either for themselves or for clients. The results of the research may lead to new firm policies or procedures in the application of existing authorities. In the research process, the practitioner/researcher must answer the following basic questions:

1. Do I have complete knowledge to answer the question, or must I conduct research to consult authoritative references?
2. What is the tax law or authoritative literature?
3. Does the law or authoritative literature address the issue under review?
4. Where can I find the law or authoritative literature and effectively and efficiently develop a conclusion?
5. Where can I find international accounting and auditing standards?
6. If no law or authoritative literature directly addresses the topic, what approach do I follow in reaching a conclusion?
7. What professional databases or other sources on the Internet should I access for the research process?
8. If more than one alternative solution exists, what alternative do I select?
9. Can I utilize data analytic tools, such as AI, to assist my research?
10. How do I document my findings or conclusions?

The purpose of this text is to provide an understanding of the research process and the research skills needed to answer these questions. The whats, whys, and hows of practical professional accounting, auditing, and tax research are discussed with an emphasis on the following topics:

- How do I research effectively?
- How do I apply a practical research methodology in a timely manner?
- What are the generally accepted accounting principles (GAAP), auditing standards, and tax authorities?

RESEARCH TIPS

Successful research requires asking and answering various questions to find and apply relevant authorities.

- What constitutes substantial authoritative support?
- What are the available sources of authority for accounting, auditing, and tax?
- What databases are available for finding relevant authorities or assisting in researching a problem?
- What role does the Internet (the information superhighway) have in the modern research process?

In conducting research for an issue or question at hand, one of the primary tools utilized in financial accounting research is the Financial Accounting Standards Board (FASB) Codification System™ (discussed in detail in Chapter 5). In addition to understanding the Codification's structure, navigating through the authoritative literature is necessary to analyze a variety of questions or issues. A useful instrument to help focus or narrow your research is a navigation guide such as the one depicted in Figure 1.1.

In navigating the literature or Codification, researchers should first focus on the functional area(s) that will guide them to the appropriate professional literature and/or database, as well as the authoritative body that issued the related literature. For instance, is the problem or issue under review a financial accounting question, managerial accounting issue, or technical Securities and Exchange Commission (SEC) problem? This functional area will oftentimes help identify the database to utilize. If the area is for accounting, one would focus on the FASB Codification. Once the functional area is determined, the next step in the navigation is to determine the broad categorization of the topic, such as an asset, a revenue, or an expense issue. Then, focusing on the subtopic allows for further segregation and navigation of the issue. For example, if the topical area is an expense issue, the subtopic might relate to cost of sales, compensation, or research and development.

The final phase in the navigation process is to focus on the section or nature of the content, which is often a recognition, measurement, or disclosure issue. For instance, if the functional area is financial accounting, the topic is assets, and the subtopic is financial instruments, the section or nature might address the proper measurement of the financial instrument either at cost or at fair value. The navigation guide is explained in detail later in the text.

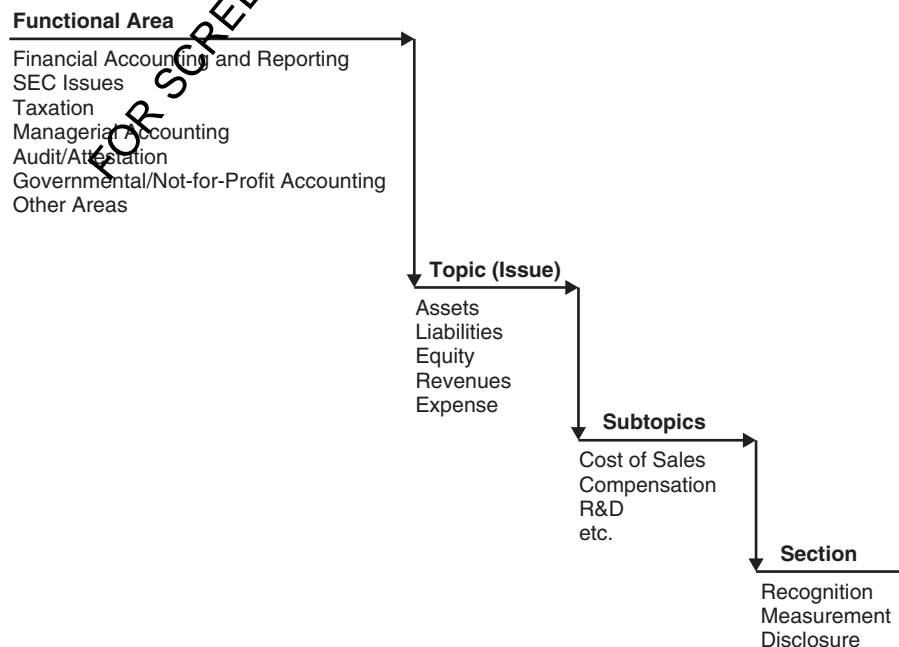


FIGURE 1.1 Research Navigation Guide.

ACCOUNTING GUIDANCE

<u>Standard Setter</u>	<u>Responsibility</u>
Federal Accounting Standards Advisory Board (FASAB)	Responsible for accounting standards for federal government entities
Financial Accounting Standards Board (FASB)	Responsible for accounting standards for private and public companies
Governmental Accounting Standards Board (GASB)	Responsible for accounting standards for state and local government entities
International Accounting Standard Board (IASB)	Responsible for the issuance of International Financial Reporting Standards
U.S. Securities & Exchange Commission (SEC)	Responsible for accounting and disclosure standards for public companies in addition to standards of the FASB

AUDIT GUIDANCE

American Institute of CPAs (AICPA)	Responsible for auditing standards for private company audits
Governmental Accountability Office (GAO)	Responsible for audits of governmental entities
International Auditing & Assurance Standards Board (IAASB)	Responsible for the establishment of international auditing standards
Public Company Accounting Oversight Board (PCAOB)	Responsible for auditing standards for public company audits

TAX GUIDANCE

<u>Primary tax sources</u>	<u>Items for Research</u>
Statutory sources	the Internal Revenue Code, the U.S. Constitution, and tax treaties
Administrative sources	Treasury Regulations, Revenue Rulings, and Revenue Procedures
Judicial sources	Case decisions from the various courts

FIGURE 1.2 Authoritative Guidance for Research.

Also presented in the text is a practical research approach, along with discussions of various research tools and demonstrations of the approach using a number of end-of-chapter questions and exercises. The text also addresses the importance of critical thinking and effective writing skills that the researcher should possess and utilize in executing the research process. Specific tips on developing these skills are presented in subsequent chapters.

As you read the following chapters, Figure 1.2 presents an overview of the accounting, auditing, and tax guidance that you will encounter in conducting your research.

Nature of Professional Research

This text focuses on applied research, known as *professional accounting research*. Today's practitioner must conduct research effectively and efficiently to arrive at appropriate and timely conclusions regarding the issues at hand. Effectiveness is critical in order to confirm the following:

- The proper recording, classification, and disclosure of economic events.
- Compliance with authoritative pronouncements.
- The absence of preferable alternative procedures.

Efficiency is needed to meet deadlines and manage research costs. Additional examples of issues frequently encountered by the practitioner include such questions as the following:

- What are the accounting, auditing, or tax implications of a new transaction?
- Does the accounting treatment of the transaction conform to GAAP?
- Does the tax treatment conform to the law?
- What are the disclosure requirements for the financial statements or tax returns?
- What is the auditor's responsibility when confronted with supplemental information presented in annual reports but not as part of the basic financial statements?
- What responsibilities and potential penalties do tax accountants face?
- How does an accountant proceed in a fraud investigation?

QUICK FACTS

The accounting researcher is an investigator with strong analytical and communication skills.

RESEARCH TIPS

Conducting research requires the use of electronic databases often available on the web.

Responding to these often complicated questions has generally become more difficult and time-consuming as the financial accounting and reporting requirements, auditing standards, and tax authorities increase in number and complexity. The research process is often complicated further when the accountant or auditor researches a practical issue or question for which no applicable authoritative literature exists.

As a researcher, the accountant should possess certain desirable characteristics that aid in the research process: inquisitiveness, open-mindedness, thoroughness, patience, and perseverance.³ *Inquisitiveness* is needed while gathering the relevant facts to obtain a clear picture of the research problem. Proper problem definition or issue identification is the most critical component in research. An improperly stated issue usually leads to the wrong conclusion, no matter how carefully the research process is executed. Likewise, the researcher needs to be *open-minded* and avoid drawing conclusions before the research process is completed. A preconceived solution can result in biased research in which the researcher merely seeks evidence to support the position rather than searching for the most appropriate solution. The researcher must carefully examine the facts, obtain and review authoritative literature, evaluate alternatives, and then draw conclusions based on the research evidence. The execution of an efficient research project requires *thoroughness* and *patience*. This requirement is emphasized both in the planning stage, where all relevant facts are identified, and in the research stage, where all extraneous information is controlled. Finally, the researcher must work *steadfastly* in order to finish the research on a timely basis.

Perhaps the most important characteristic of the research process is its ability to add value to the services provided. A professional auditor not only renders an opinion on clients' financial statements but also identifies available reporting alternatives that may benefit them. A professional tax accountant not only prepares the returns but also suggests tax planning for future transactions. The ability of a researcher to provide relevant information becomes more important as the competition among accounting firms for clients intensifies and the potential significance and enforcement of penalties become increasingly common. Researchers who identify reporting alternatives that provide benefits or avoid pitfalls will provide a strong competitive edge for their employers. Providing these tangible benefits to clients through careful and thorough research is essential in today's accounting environment.

Critical Thinking and Effective Communication

Researchers need to know how to think; that is, they must identify the problem or issue, gather the relevant facts, analyze the issue(s), synthesize and evaluate alternatives, develop an appropriate solution, and effectively communicate the desired information. Such abilities are essential for the

³ Wanda Wallace, "A Profile of a Researcher," Auditor's Report, American Accounting Association (Fall 1984): 1–3.

professional accountant in providing services in today's complex, dynamic, and changing profession. In this environment, the professional accountant must possess the ability not only to think critically, which includes being able to grasp a variety of contexts and circumstances, but also apply and adapt various accounting, auditing, tax, and business concepts and principles to the circumstances in order to develop the best solutions. The development and nurturing of critical thinking skills will also contribute to the lifelong learning that today's professionals need to nurture.

Research efforts may culminate in memos or work papers, letters to clients, journal articles, or firm reports. Whatever its form, the dissemination of your research will require effective communication skills for both oral presentations and written documents. Your research output must demonstrate coherence, conciseness, appropriate use of Standard English, and achievement of the intended purpose. Critical thinking and effective writing skills are the focus of Chapter 3.

RESEARCH TIPS

Successful research requires critical thinking and effective communication.

Economic Consequences of Standards Setting

It is often desirable, if not necessary, to investigate the economic consequences of accounting standard setting. Without this exploration, the establishment of a particular accounting standard may produce unintentional or unforeseen economic consequences. And accounting standards can have far-reaching economic consequences, as was demonstrated by the FASB in addressing such issues as restructuring costs, financial instruments and fair value accounting, stock options, and postemployment benefits. Difficulties sometimes arise in the proper accounting for the economic substance of a transaction within the current accounting framework.

Because financial statements must conform to GAAP, the standard-setting bodies, such as the FASB or Governmental Accounting Standards Board (GASB), conduct research on the economic impact of any proposed standard. For example, the handling of off-balance sheet transactions has sometimes encouraged the selection of one business decision over another, producing results that may be less oriented to the users of financial statements.

In today's complex business and legal environment, the accounting and auditing researcher should understand the economic and social impact that accepted accounting alternatives may have on society in general and on individual entities in particular. Such economic and social concerns are becoming a greater factor in the evaluation and issuance of new accounting standards, as discussed more thoroughly in Chapter 3.

Role of Research in the Accounting Firm

Although accountants often conduct research in education, industry, and government, the particularly important areas for a public accounting firm are accounting, auditing, and tax. Reflecting today's society, significant changes have occurred in the accounting environment. The practitioner today requires increased knowledge because of the heightened complexity of many business transactions, the proliferation of new authoritative pronouncements, and advances in technology. As a result, practitioners should possess the ability to conduct efficient research. An accountant's responsibility to conduct accounting/auditing research is analogous to an attorney's responsibility to conduct legal research. For example:

- A lawyer should provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness, and preparation reasonably necessary for the representation.⁴
- A California court interpreted the research requirement to mean that each lawyer must have the ability to research the law completely, know the applicable legal principles, and find "the rules"

⁴ Model Rules of Professional Conduct of the American Bar Association, Rule One.

QUICK FACTS

The accounting practitioner may be held liable for inappropriate or incomplete accounting or tax research.

which, although not commonly known, are discovered through standard research techniques.⁵ Thus, in the California case, the plaintiff recovered a judgment of \$100,000 in a malpractice suit that was based on the malpractice of the defendant in researching the applicable law.

- The U.S. SEC has also stressed the importance of effective accounting research through an enforcement action brought against an accountant. In Accounting and Auditing Enforcement Release No. 420, the SEC instituted a public administrative proceeding against a CPA. The SEC charged that the CPA failed to exercise due care in the conduct of an audit. The enforcement release specifically stated the following:

In determining whether the [company] valued the lease properly, the [CPA] failed to consult pertinent provisions of GAAP or any other accounting authorities. This failure to conduct any research on the appropriate method of valuation constitutes a failure to act with due professional care.

Thus, the professional accountant must possess the ability to use relevant sources to locate applicable authoritative pronouncements or law and to ascertain their current status. Due to the expanding complex environment and proliferation of pronouncements, many accounting firms have created a research specialization within the firm. Common approaches used in practice include the following:

1. The staff at the local office conducts day-to-day research, whereas industry-specific questions are referred to industry specialists within the firm.
2. Selected individuals in the local or regional office are designated as research specialists, and all research questions within the office or region are brought to their attention for research.
3. The accounting firm establishes at the firm's executive office a centralized research function that handles technical questions for the firm as a whole.
4. The firm maintains computerized files of previous research to provide consolidated expertise on how the firm has handled issues in the past.

The task of accurate and comprehensive research is often complex and challenging. However, one can meet the challenge by becoming familiar with the suggested research process to solve the accounting, auditing, or tax issues.

Figure 1.3 depicts a more in-depth look at a typical organizational structure for policy decision-making and research on accounting and auditing matters in a multioffice firm that maintains a research department. The responsibilities of a firm-wide accounting and auditing policy decision function include:

- Maintaining a high level of professional competence in accounting and auditing matters.
- Developing and rendering high-level policies and procedures on accounting and auditing issues for the firm.
- Disseminating the firm's policies and procedures to appropriate personnel within the firm on a timely basis.
- Supervising the quality control of the firm's practice.

Research plays an important role in this decision-making process. A CPA firm's policy committee and executive subcommittee, as shown in Figure 1.3, generally consist of highly competent partners with many years of practical experience. The policy committee's primary function is to evaluate significant accounting and auditing issues and to establish firm-wide policies on these

⁵ *Smith and Lewis*, 13 Cal. 3d 349, 530 P.2d 589, 118 Cal Rptr. 621 (1975).

RESEARCH TIPS

At times, conducting research will require consulting with research specialists.

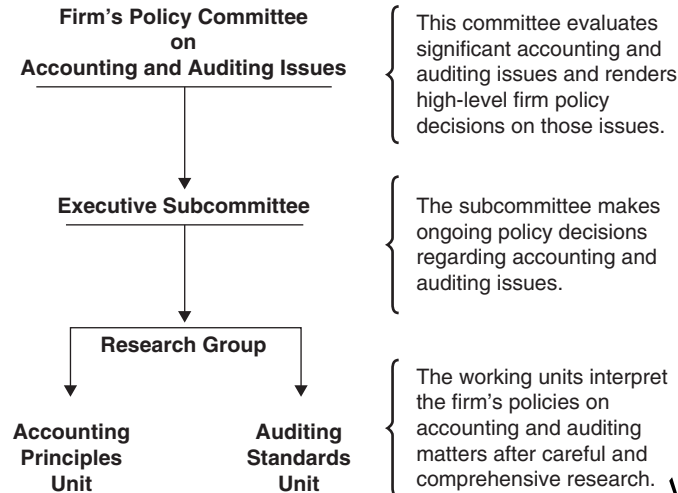


FIGURE 1.3 Organizational Framework for Policy Decision-Making and Research Within a Typical Multioffice Accounting Firm.

issues. The executive subcommittee's function is to handle the daily ongoing policy (lower-level) decisions for the firm as a whole. The responsibility of the accounting and auditing research personnel is to interpret firm policies in the context of specific client situations. Frequently, technical accounting and auditing issues that arise during the course of a client engagement are resolved through research conducted by personnel assigned to the engagement. When a local office cannot resolve a research matter satisfactorily, assistance is requested from the firm's specialized research units. These units conduct careful and comprehensive research in arriving at the firm's response to technical inquiries. This response is then disseminated to the various geographic offices of the firm for future reference in handling similar technical issues.

Practical accounting and auditing research is not confined to public accounting firms. All accountants should possess the ability to conduct effective research and develop logical and well-supported conclusions on a timely basis. The basic research process is similar whether the researcher is engaged in public accounting, management accounting, governmental accounting, auditing, or even taxation.

Skills Needed for the CPA Exam and Practice

In the licensing of a new CPA, state laws or regulations typically require a combination of education, examination, and experience. State legislatures, state boards of accountancy, the Public Company Accounting Oversight Board (PCAOB), and the American Institute of Certified Public Accountants (AICPA) have strived to assure the professional competencies of CPAs. The current exam (Effective 1/1/2024) consists of three Core exam sections and one Discipline exam section of a candidate's choice.

Skills in practice identified for the CPA in the 2022 CPA Exam Blueprints (Effective for 1/1/2024) fall into four basic skill categories: (1) remembering and understanding, (2) application, (3) analysis, and (4) evaluation. These skills are part of the Bloom's Taxonomy which is discussed in further detail in Chapter 3 of this text.

Remembering is acquired through education, experience, and familiarity with information.

Understanding is the process of using concepts to address the facts or situation. The CPA exam

has reduced the importance of *remembering and understanding* information because someone who can easily memorize information doesn't always do well when they go to work.

Application is the use or demonstration of knowledge, concepts, or techniques. Application skills include research and technological skills. Research skills include recognizing keywords, searching through large volumes of electronic data, and organizing data from multiple sources. Technological skills are needed in using spreadsheets, databases, and computer software. Application represents about one-half of the skills tested in the CPA exam.

Analysis involves determining compliance with standards, noticing trends and variances, and performing appropriate calculations. It examines the interrelationship of areas to find causes or to find relevant evidence.

Evaluation is the assessment of problems and use of judgment to draw conclusions. Judgment includes devising a plan of action for any problem, identifying potential problems, and applying professional skepticism. Evaluation questions are very limited, just appearing in the auditing part of the CPA exam. Evaluation may include solving unstructured problems, examining alternative solutions, developing logical conclusions, and integrating information to make decisions.

In the CPA exam, task-based simulations might require students to:

- Interpret and apply the relevant professional literature to specific fact patterns in various cases.
- Identify relevant information and draw appropriate conclusions from the necessary professional literature provided.
- Recognize business-related issues as they evaluate an entity's financial condition.
- Identify, evaluate, analyze, and process an entity's accounting and reporting information.

Also in the CPA exam, candidates' assessment of one's research and related critical thinking skill are tested differently from the previous version of the exam. Prior research skills questions focused on searching the authoritative literature for an appropriate citation. Now the research and critical thinking skills will include multiple responses, some of which will go beyond just locating a citation, and moves into problem solving. However, the literature presented will be from various parts of the authoritative literature rather than an isolated database. Thus, the following chapters of this text will provide you the research functionality of getting into the literature that should assist you on what you might see on the simulations on the CPA exam.

Overview of the Research Process

The research process in general is often defined as a scientific method of inquiry, a systematic study of a field of knowledge in order to discover scientific facts or principles. An operational definition of research encompasses the following process⁶:

RESEARCH TIPS

Conduct each step in the research process carefully.

- Investigate and analyze a clearly defined issue or problem.
- Use an appropriate scientific approach.
- Gather and document adequate and representative evidence.
- Employ logical reasoning in drawing conclusions.
- Support the validity or reasonableness of the conclusions.

⁶ David J. Luck, Hugh C. Wales, and Donald A. Taylor, *Marketing Research* (Englewood Cliffs, NJ: Prentice Hall, 1961), p. 5

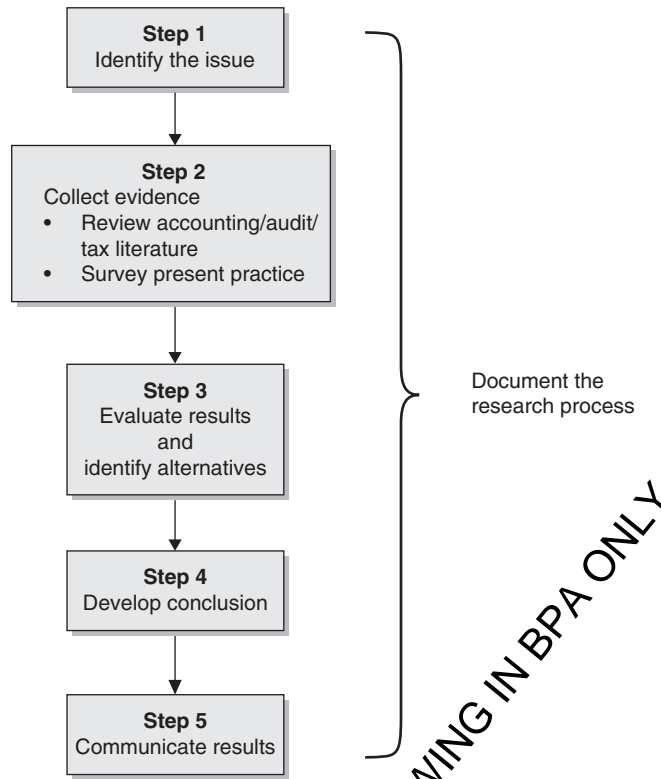


FIGURE 1.4 The Research Process.

With this general understanding of the research process, practical accounting, auditing, and tax research is defined as follows:

Accounting, auditing, or tax research: A systematic and logical approach employing critical thinking skills to obtain and document evidence (authorities) underlying a conclusion relating to an accounting, auditing, or tax issue or problem.

The basic steps in the research process are illustrated in Figure 1.4, and an overview is presented in the following sections. As indicated in the figure, carefully document each step of the research process. When executing each step, the researcher may also find it necessary to refine the work done in previous steps. The refinement of the research process is discussed in more detail in Chapter 10.

QUICK FACTS
The research process is appropriate for any type of accounting or tax issue confronted.

Step One: Identify the Relevant Facts and Issues

The researcher’s first task is to gather the facts surrounding the problem. However, problem-solving research cannot begin until the researcher clearly and concisely defines the problem. Researchers need to analyze and understand the why and what about the issue to begin the research process. Without knowing why the issue was brought to their attention, they might have difficulty knowing what to research. Novice researchers may find it difficult to distinguish between relevant and irrelevant information, and in those cases, it is advisable to err on the side of gathering too many facts rather than too few. As researchers become more knowledgeable, they become more skilled at quickly isolating the relevant facts. Data analytics, as discussed in greater detail in subsequent chapters, may assist in understanding the issue/problem under review.

In most cases, the basic issue is identified before the research process begins, such as when a client requests advice about the proper handling of a transaction. However, further refinement of the exact issue is often required. The refining of the issue is referred to as *problem distillation*, whereby a general issue is restated in sufficiently specific terms. If the statement of the issue is too broad or general, the researcher is apt to waste valuable time consulting irrelevant sources.

RESEARCH TIPS

Use electronic databases and the Internet to help collect the evidence.

Factors to consider in the identification and statement of the issue include the exact source of the issue, its justification, and the determination of its scope. To successfully design and execute an investigation, state the critical issue clearly and precisely. As explained in Chapters 5 and 7, many research tools, especially computerized databases, are indexed by a set of descriptive words. Because keywords aid in reference identification, failure to use the appropriate keywords or understand the facts in sufficient detail can cause a researcher to overlook important authorities. Undoubtedly, writing a clear, concise statement of the problem is the most important task in research. Failure to frame all the facts can, and often will, lead to an erroneous conclusion.

Step Two: Collect the Evidence

QUICK FACTS

The Internet opens a vast world of information for the professional accountant/researcher.

As stated, problem-solving research cannot begin until the researcher accurately defines the problem. Once the issues are adequately defined, the researcher is ready to proceed with step two, the collection of evidence. This step usually encompasses a detailed review of relevant authoritative accounting or auditing literature and a survey of present practice. In collecting evidence, the researcher should be familiar with the sources available, identify which to use, and know the order in which to examine them and other applicable authorities.

The early identification of the relevant sources aids in the efficient conduct of the research. A number of research tools, including electronic databases and the Internet, that aid in the collection of evidence are identified and discussed in detail in Chapters 5–9. With the Internet growing at an exponential rate as new websites are added every day, this tool provides an increasingly significant impact on the way people, including accountants, auditors, and tax professionals, conduct business. The Internet permits accounting professionals to use discussion groups or webinars whereby professionals discuss topics on accounting, auditing, or tax issues. Accountants use the Internet to search for federal and state legislation that may have an impact on clients and to retrieve financial statements from SEC filings. Figure 1.5 provides an example of how a small CPA firm might utilize the Internet. Many accountants also use the Internet to interact quickly and effectively with the client to assist in collecting the appropriate evidence, such as requesting additional facts that may influence the evidence needed or results from the relevant authorities.

When authoritative literature does not exist on an issue, practitioners should develop a theoretical resolution of the issue based on a logical analysis of the factors or analogous authorities. In addition, they need to evaluate the economic consequences of the alternatives in the development of a conclusion. Note that, in practice, a solution is sometimes not readily apparent. Professional judgment and theoretical analysis are key elements in the research process.

RESEARCH TIPS

Different search engines on the Internet can give you different hits. So use more than one search engine when conducting research.

Step Three: Analyze the Results and Identify the Alternatives

Once practitioners have completed a thorough investigation of the facts and the collection of evidence, the next step is to evaluate the results and identify alternatives for one or more tentative conclusions. They must fully support each alternative by authoritative literature or a theoretical justification with complete and concise documentation. One cannot expect to draw sound conclusions from faulty information. Soundly documented conclusions are possible only when the information has been properly collected, organized, and interpreted.

Mark Jensen, CPA, states that the Internet has become the “greatest equalizer” because it provides his small practice with many of the research tools formerly utilized only by the big international accounting firms. “It lets me offer resources and services to my clients and future clients that the big firms have to offer,” says Jensen.

Mark was asked by a would-be entrepreneur to help write a business plan to open a computer software store in southern New York State. Both Jensen and the client were computer literate, but neither of them knew much about the software business. So Mark accessed the Internet and, within an hour, was deluged with information about software stores.

A word search for “software” yielded more than one hundred articles about computer stores, including one from the *Washington Post* about a software store start-up. Jensen also gleaned information about software stores from the small business forums on the Internet. Mark and his client used the information to prepare a business plan that helped secure financing for the business.

Access to the Internet allows Jensen to search through news sources throughout the world. Publications and news services such as *The New York Times*, Associated Press, United Press International, Reuters, *Financial Times of London*, and Dow Jones News Service are just a few of the sources available on the Internet.

Mark also retrieves news items for clients as an effective way to maintain relationships and attract new clients. One of his clients is in the machine tools industry, and Mark frequently notifies the client when a major industry event takes place.

Besides tracking news, Jensen uses the Internet to exchange e-mails with clients and associates. He can also access the SEC's website and obtain recent SEC filings of major public companies, such as their 10-K, 10-Q, or other filings.

FIGURE 1.5 An Example of a Small CPA Firm's Utilization of the Internet.

Further analysis and research are sometimes needed about the appropriateness of the alternatives identified. This reevaluation may require further discussions with the client or consultations with colleagues. In discussing an issue with a client, researchers should use professional skepticism and recognize that management is not always objective in evaluating alternatives. For example, the issue may involve the acceptability of an accounting method that the client currently uses. In such cases, the research is directed toward the support or rejection of an alternative already decided on by management. Given the possibility of bias, researchers should retain a degree of professional skepticism in discussions with the client regarding their conclusion.

Step Four: Develop a Conclusion

After a detailed analysis of the alternatives, including economic consequences, the researcher develops a conclusion and thoroughly documents the final conclusion selected from the alternatives identified. The conclusions should be well supported by the evidence gathered. The conclusion and details of the proposed solution are then presented to the client.

Step Five: Communicate the Results

The most important point in the communication is the conclusion reached. The communication often takes the form of a research memorandum, requiring an objective and unbiased analysis and report. The memorandum should contain a statement of facts, a clear and precise statement of the issue, a brief and straightforward conclusion, and a discussion of the authoritative literature and explanation about how it applies to the set of facts. The written communication should communicate clearly and follow the conventional rules of grammar, spelling, and punctuation. Particularly, because a client often cannot evaluate the quality of research,

nothing diminishes a professional's credibility with the client faster than misspellings, incorrect grammar, or the misuse of words. Sloppy communications may suggest sloppy research and analysis.

In drafting the appropriate written communication, avoid making common errors, such as:

1. Excessive discussion of the issue and facts in a memo, which indicates that the memo was not drafted with sufficient precision.
2. Excessive citations to authoritative sources (cite only the relevant authorities for the conclusion reached).
3. Appearing to avoid a conclusion by pleading the need for additional facts.
4. Including irrelevant information, which novice researchers do and which distracts from the fact that the proposed solution to the problem is appropriate.

RESEARCH TIPS

After analyzing the results, develop a conclusion and communicate the results.

A serious weakness in any part of the research and communication process undermines the entire effort. Therefore, address each step in the process with equal seriousness because each has its impact on the entire research project. Chapter 3 will focus on communication skills.

Data Analytics/AI in Accounting and Auditing Research

Data analytics/big data and new emerging technologies such as artificial intelligence (AI) and robotic process automation (RPA) are having a major impact in the business environment including accounting, whether public or corporate accounting. "Big data" is often referred to as an entity's information asset. Big data coupled with data analytics impacts all areas in business decision-making and related business strategies. Data analytics, as defined in Wikipedia, is "a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making." For instance, data analytics can enhance an entity's marketing analysis of customer buying power, improve supply chain efficiencies, enhance the planning and analysis of financial decisions, improve risk management, impact accounting, and transform the audit process. It can assist the accounting or auditing researcher in the beginning steps of the research process of identifying the problem to research, or in obtaining a deeper understanding of the issue, which aids in the search for the appropriate authoritative literature as to the proper accounting or auditing solution.

QUICK FACTS

Data Analytics/AI is becoming more important in conducting research.

No matter what your job is, CEO, CFO, or independent auditor, big data/data analytics will transform your work. Data analytics software, as discussed in greater detail in subsequent chapters, has the ability to analyze structured and unstructured data. Major stores, like Walmart, sell millions of products to millions of customers around the world. In such a competitive world, to compete, one must have the right price, meet customer demands, with the right products in the right place, and present solutions to major decisions by management such as logistical issues. Oil companies, like Shell Oil, had traditionally searched for new reserves by inserting sensors into the earth to analyze seismic waves, which provided a hit or miss evaluation. Now with data analytics, Shell is analyzing not a few thousand seismic waves, but millions that are compared to various other sites around the world to provide matches of profitable reserve sites to drill. This reduces costs and improves profits. Also, with sensors on the production equipment, Shell is able to monitor the equipment for performance and condition; the sensors indicate time for preventative maintenance.

As described earlier, data analytics is simply a process of ascertaining theoretical or actable business intelligence from business facts/data. Two perspectives exist as to the direction of research: (1) Authoritative accounting or auditing literature can provide guidance as to analyzing the data by identifying what the literature requests, and then determining if the data supports the literature. (2) The alternative perspective is that data can provide business facts that are used to search the authoritative accounting or auditing literature to provide a potential solution for proper recording or disclosure.

Data analytics analysis can be either qualitative or quantitative. A qualitative analysis is effective for a priori (before-the-fact) judgment that suggests disclosure information that might be warranted. The qualitative analysis could also be effective for a posteriori (after-the-fact) assessment of aggregate effect such as a post-implementation review verdict as to whether a potential fraud exists or whether the accumulated balance of all potential risk transactions exceed a materiality threshold.

A quantitative analysis is effective for a priori (before-the-fact) estimation of aggregate data such as a feasibility study cost estimation of implementation as to what amounts need be booked in an adjusting entry. Quantitative analysis can also be effective for a posteriori (after-the-fact) assessment of an aggregate effect, such as post-implementation review of cost and operational effectiveness, or volume and net impact of likely fraud, or the accumulated balance of all potential at risk transactions. Data analytics in general creates a fact-based research medium from existing data that moves beyond authoritative literature into business intelligence.

The rise of the importance of data analytics has been the proliferation of technological improvements and “big data” (large volume). Furthermore, the expanding social conscientious around “data” with its various impact on decision-making and ethical concerns has also increased the use of data analytics. A major focus of CFOs at Fortune 500 companies is on data analytics and data analytics departments.

As one becomes involved in data analytics, new concepts and tools become important. Rather than just structured data to analyze (i.e., Excel spreadsheets) unstructured data or semi-structured data are also being incorporated in the analysis (i.e., pictures or videos, paper contracts, or Twitter feeds, and data being steamed on the Internet).

New tools such as IBM Watson X, Microsoft BI, Tableau, and other enhanced tools such as ACL Analytics, MindBridge AI, and CaseWare IDEA plus advanced analytics are used for predictive modeling (i.e., statistical analysis with R or SAS software) and will become an important part of effective data analytics. The new and expanded core competencies and techniques for data analytics can be applied to all areas of accounting, audit, tax, and consulting engagements. Various chapters of this text present greater detail as to how data analytics/data visualization can be utilized in research.

More specifically, is the recent introduction of Generative AI (Gen AI). Many believe that Gen AI has the potential to revolutionize not only businesses, but also the accounting profession. New to this edition of the text is Chapter 2 that provides an overview of the history of AI and its impact on the accounting profession and how Gen AI can be utilized in accounting and auditing research. Subsequent chapters of the text will explain how AI impacts accounting, tax, audit and fraud investigations with end of chapter exercises that focus on AI usage.

Having a better focus on the business transactions provided by data analytics/AI can impact your research by focusing on the detailed issues/problem, which will then assist in researching the accounting or auditing standards that apply.

SUMMARY

The research work of a practicing professional accountant is very important. Few practitioners ever experience a workweek that does not include the investigation and analysis of an accounting, auditing, or tax issue. Thus, every professional accountant should possess the ability to conduct practical, systematic research.

QUICK FACTS

Data Analytics/AI are revolutionizing accounting.

The goal of this text is to aid current and future practitioners in developing a basic framework or methodology to assist in the research process.

The emphasis of the following chapters is on practical applied research that deals with solutions to immediate issues rather than theoretical research that has little or no present-day application:

- Chapter 2 is a new chapter to this edition on AI in Accounting and Auditing Research. Subsequent chapters will discuss this topic and the impact of AI on the profession and professional research.
- Chapter 3 presents an overview of the importance of critical thinking and effective writing skills that every researcher (accountant/auditor/tax professional) must possess to be effective.
- Chapters 4 and 9 provide an overview of the environment of accounting and auditing/attestation research, with an emphasis on the standard-setting process.
- The FASB's Codification Research System™ and SEC search tools are presented in Chapter 5.
- The sources of authoritative literature in dealing with international accounting issues are discussed in Chapter 6.
- Chapter 7 presents other available research tools that may aid in the effective and efficient conduct of practical research, with an emphasis on computerized research via existing databases.
- Chapter 8 provides the basic steps of tax research and valuable databases and websites. The chapter highlights the Checkpoint tax database, part of which is also utilized in the CPA exam.
- Chapter 9 discusses the various types of assurance and consulting services and the applicable standards in conducting research.
- Chapter 10 concludes with a refinement of the research process by presenting specific annotated procedures for conducting and documenting the research process via a comprehensive problem.
- Chapter 11 provides an overview of fraud and insights into the basic techniques of fraud investigation, an area that is particularly pertinent as more practitioners are entering the specialized field of forensic accounting. The basic steps of a fraud investigation are similar to accounting research.

DISCUSSION QUESTIONS

1. Define the term *research*.
2. Explain what accounting, auditing, and tax research are.
3. Why is accounting, auditing, and tax research necessary?
4. What is the objective of accounting, auditing, and tax research?
5. What role does professional research play in an accounting firm or department? Who primarily conducts the research?
6. What are the functions or responsibilities of the policy committee and executive subcommittee in a multioffice firm?
7. Identify and explain some basic questions the researcher must address in performing accounting, auditing, or tax research.
8. Differentiate between theoretical and applied research.
9. Identify the characteristics that an accounting practitioner should possess.
10. Provide an example of utilizing the research navigation guide.
11. Distinguish between a priori and a posteriori research. Which research is used more for planning work?
12. Explain the analogy of the California court decision dealing with legal research as it relates to the accounting practitioner.

13. Explain how the research process adds value to the services offered by an accounting firm.
14. What consequences are considered in the standard-setting process?
15. Explain the importance of identifying keywords when identifying relevant facts and issues.
16. Explain the five basic steps in research.
17. Discuss how research can support or refute a biased alternative.
18. Explain what is meant by problem distillation and its importance in the research process.
19. What skills are important and tested in the CPA exam?
20. Your conclusion to the research is often presented to your boss or client in the form of a research memorandum. Identify the basic points to include in this memo. Also, identify at least two common errors to avoid in the drafting of the memo.
21. Explain the necessity of critical thinking in the research process.
22. Why did the SEC bring an enforcement action against a CPA concerning research?
23. If authoritative literature does not exist, what steps might the researcher take?
24. If one is researching for accounting standards related to a federal government agency, which standard setter would you focus your research on?
25. As an accountant for Microsoft, you are conducting accounting research related to pension accounting, would you utilize the standards of the AICPA, GAO, FASB, or the PCAOB? Why?
26. Briefly explain the distinction between qualitative and quantitative analysis in conducting data analytics.
27. Define data analytics.
28. Provide an example of structured and unstructured data.

EXERCISES

1. In auditing a public company, you decided to access the PCAOB website (www.pcaobus.org), click on auditors followed by clicking on quality controls standards and identify by title two quality control standards.
2. Your firm has received a request from an international company client as to a certain accounting issue. Access the IFRS website (www.ifrs.org), and briefly explain the role of the IASB and the standards issued by the Board.
3. In auditing an international company, or a subsidiary of an international company, you would more than likely need to follow the auditing standards of the International Auditing & Assurance Standards Board. Access the IAASB's website (www.iaasb.org) and click on the Standards and Pronouncements link and briefly explain two publications of the IAASB.
4. Access the AICPA website (aicpa-cima.com) and click on the Resources link followed by clicking on Publications, and name two major publications of the AICPA.