Linda Wong

Personality Types

Time Management

Notetaking Skills

Technology Skills

Listening Skills

Essential Study Skills

12 PRINCIPLES OF MEMORY

Test-Taking

Setting Goals

Power of Mindset

Boost Your Memory

JANUARY

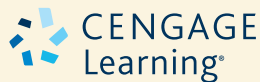Motivation

EIGHTH EDITION

Brief Contents

Essential Study Skills

EIGHTH EDITION

LINDA WONG

CENGAGE
Learning®

Australia • Brazil • Mexico • Singapore • United Kingdom • United States

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Contents

CHAPTER 5

Processing Information into Your Memory   134

CHAPTER 6

Rehearsing and Retrieving Information from Memory   166

CHAPTER 7

Preparing for Upcoming Tests   194

APPENDIX A

Essential Test-Taking Skills   A1

APPENDIX B

Answer Keys   B1

APPENDIX C

Exercises, Inventories, and Checklists   C1

APPENDIX D

Excerpts   D1

Preface

Welcome to the new edition of *Essential Study Skills*. As in the Seventh Edition, the Eighth Edition empowers students to excel by using a metacognitive, multisensory approach throughout the textbook to provide them with essential study skills to increase their academic performance. Changing behaviors occurs most successfully when students understand *how* they learn, *what* skills they need to learn to use to perform specific tasks, and *which* strategies work most effectively to achieve desired outcomes. In the new world of ever-increasing technological distractions, the Eighth Edition of *Essential Study Skills* specifically shows students how to refocus on student-oriented strategies that work and how to consider ways to use technology to their advantage when studying. The textbook is designed to encourage all students—freshmen, nontraditional, and returning—to take greater responsibility for their learning, increase their self-confidence and motivation, discover strategies that work for them as individuals, and implement plans of action to achieve their academic and personal goals. The majority of students *want* to learn! This Eighth Edition provides students with exciting tools to turn *wants* and *desires* into reality and academic success.

Helping Students Study and Learn

Essential Study Skills, Eighth Edition, is a student-friendly textbook that builds a strong foundation of essential study skills strategies designed to boost memory, integrate skills and concepts, and excel in the classroom. The following chart highlights the book features in the Eighth Edition that make this edition unique, engaging, appealing—and most important of all—highly effective.

Book Features to Help Students

Features to Help Students Grasp Key Concepts and Main Ideas in Chapters	• Clear chapter Learning Objectives • Chapter Outline • Chapter Visual Mapping to expand with details of topics • Concise Learning Objectives Review
A Wealth of Step-by-Step Approaches	• Direct, easy–to-read and learn strategies • Clear steps for using memory tools • Concise bulleted points to clarify important concepts • Clear examples to explain new concepts
Features to Enhance Learning	• List of chapter terminology to learn • Marginal notes with definitions of terms to know • Visually appealing charts that summarize strategies • Multicolor format showing levels of information • Exercises that reinforce learning strategies

(continued)

Book Features to Help Students *(continued)*

Self-Assessment Tools	• Chapter Profiles to examine attitudes and behaviors • Checklists in the textbook to assess skills and progress • Concept Checks to strengthen comprehension • Self-correcting Check Points to verify understanding • End-of-the-chapter Review Questions
Activities to Engage Students	• Textbook exercises • Textbook Case Studies • Group Processing activities • Reflective Writing assignments • Critical Thinking activities
Appendix A	A comprehensive Essential Test-Taking Skills guide with fifty-two test-taking strategies and tips to apply to all kinds of test questions and test-taking situations
Appendix B	Answer keys for Chapter Profiles, Check Point quizzes, and Chapter Review Questions
Appendix C	Inventories and checklists to self-assess performance and skill levels
Appendix D	Textbook excerpts from a variety of content areas to reinforce skills used throughout the textbook

Online Features to Help Students

The Eighth Edition recognizes that technology motivates many students and provides them with multisensory approaches for working with course materials and skills. Many online materials and options are available for students to use to enhance the learning process. Students will be delighted to see the following online materials available for the **Essential Study Skills,** Eighth Edition textbook:

- The **online textbook** in the student College Success CourseMate

- Self-correcting **Chapter Profile** questions

- Printable **Chapter Visual Mapping** to expand with details

- An **expanded Chapter Outline** to use for studying and reciting

- Complete **list of Concept Check questions** to use for self-quizzing

- **Textbook Case Studies** and **Reflective Writing assignments**

- **Topics In-Depth** that present information that is only available online

- **Practice Quizzes** available only online for each chapter Check Point

- **Enhanced Quizzes** that link to sections of the online textbook

- **Flashcards** and an **online glossary** of terminology

- New **Chapter Study Guides** for each chapter

Helping Instructors Teach with Resources

Essential Study Skills, Eighth Edition, is an instructor-friendly textbook that provides the pedagogy and resources to help students build a strong foundation of essential study skills strategies, heighten their understanding of the learning process, and increase their performance and excellence in the classroom. The Eighth Edition recognizes instructors' needs to have a wealth of resources available at their fingertips to use to create a dynamic, engaging, and highly effective study skills course. The following chart highlights the book features in the Eighth Edition that make this edition ideal for instructors who want a textbook packed with resources and instructional options oriented to active learning.

Book Features to Help Instructors

Chapter Sequencing	• Flexible format allows you to select the most effective order of chapters to teach • Instructor options for best time to teach Appendix A, Essential Test-Taking Skills
Structured Chapters	• Color-coded headings related to the chapter Learning Objectives • Clear subheadings to identify specific topics • Bulleted points to identify important details and steps • Consistent chapter format with Concept Checks, Check Points, definitions in margins, and types of chapter exercises
Ready-to-Use Classroom Activities	• A variety of exercises in the textbook that you can use for class activities for which only you have the answer keys • Concept Check questions in margins for small group or class activities, writing assignments, or short pop quizzes • List of Terms to Know for partner vocabulary drills and quizzing • Group Processing activities designed to use with small groups • Critical Thinking activities for homework assignments, small group activities, or whole class discussions
Ready-to-Use Self-Assessment Tools	• Checklists within chapters for students to engage in the topics • Self-scoring Checklists in Appendix C for students to complete, reflect on, and discuss in class • Inventories for students to analyze their behaviors and skills
Instructor Resource Manual (IRM)	• A printed version and an online version available • Suggestions for organizing your course and grading system • Step-by-step teaching tips • Answer keys for chapter exercises • Reduced images of PowerPoint slides • Reduced images of transparency masters that you can use in class or as handouts

(continued)

Book Features to Help Instructors *(continued)*

Excerpts in Appendix D to Use for Instructional Purposes	Use the following excerpts to practice reading, annotating, notetaking, and test-taking skills: • Excerpt 1: Understanding Stress and Stressors • Excerpt 2: Practice Visualization • Excerpt 3: Adopting a Healthy Lifestyle • Excerpt 4: Semantic Networks • Excerpt 5: Building Blocks of Medical Language • Excerpt 6: Professional Leadership • Excerpt 7: The Scientific Method • Excerpt 8: How to Listen Critically
Self-Scoring Activities	• Students have answer keys to score Chapter Profiles • Students have answer keys to score Check Point quizzes • Students have answer keys to score chapter Review Questions

Online Features to Help Instructors

The **Instructor Website** is a comprehensive website that puts teaching tools and resources at your fingertips. By logging in at *CengageBrain.com*, you will find the following valuable instructor resources:

- The complete **Instructor Resource Manual** online, which includes teaching tips, answer keys to chapter exercises, and ready-to-use tests. (A printed version is also available upon request.)
- The **transition guide** that helps you move from the Seventh Edition to the Eighth Edition
- **Expanded Chapter Outlines** and **Lists of Concept Checks**
- **Ready-to-use tests** and **answer keys** for each chapter
- **Grading rubrics** to use for inventories, writing assignments, and homework exercises
- Full-size **transparency masters and PowerPoint slides** to download for classroom lectures, presentations, and handouts for each chapter
- The twelve new **Chapter Study Guides** to print for students, make available on your class website, or request students to download and print from the College Success CourseMate
- **Answer Keys for the new Chapter Study Guides**
- The **Cognero Online Testing Program** is the flexible online testing system that allows you to author, edit, and manage test bank content. You can create multiple test versions instantly and deliver them through your Learning Management System from your classroom, or wherever you may be, with no special installs or downloads required.

What's New in the Eighth Edition of *Essential Study Skills*

The Eighth Edition has a new chapter on technology (Chapter 12); a revised chapter organization that puts earlier emphasis on self-management or self-regulatory skills; new pairings and integration of related topics; new topics in chapters; and more comprehensive coverage of high-demand topics.

Reorganized Chapters

As you examine the full table of contents for the Eighth Edition, you will discover the new lineup of chapters, topics, and study strategies:

- **Chapters 1 through 4 Focus on Personal Preferences and Self-Management Skills**
  - Working with learning style and personality preferences and multiple intelligences
  - Developing a powerful mindset that includes attitudes and beliefs
  - Strengthening critical thinking skills
  - Managing time and increasing concentration
  - Achieving goals and increasing motivation
  - Reducing stress and procrastination

- **Chapters 5 and 6 Focus on Strengthening Memory**
  - Exploring how memory works in the Information Processing Model
  - Learning how to use new memory processes and strategies
  - Understanding ways to combat six kinds of forgetting
  - Applying the Twelve Principles of Memory
  - Using mnemonics effectively

- **Chapter 7 Focuses on Preparing for Tests**
  - Organizing materials and time to prepare for upcoming tests
  - Understanding different kinds of test questions
  - Using Appendix A, the Essential Test-Taking Skills pull-out guide
  - Managing test anxiety

- **Chapters 8 through 11 Focus on Reading, Notetaking, and Listening Skills**
  - Improving textbook reading skills by understanding the reading process
  - Using different reading systems for different kinds of textbooks
  - Learning skills for reading online (digital) e-textbooks
  - Working with paragraph-levels skills, such as vocabulary and organizational patterns
  - Annotating (highlighting, marking, and making marginal notes) in textbooks
  - Using a variety of notetaking systems to take textbook and lecture notes
  - Adjusting reading strategies for reading in a variety of content areas
  - Creating and using visual notes to learn course content
  - Strengthening listening skills and developing effective lecture notes

- **NEW: Chapter 12 Focuses on Using Technology**
  - Understanding basic computer concepts and computer literacy skills
  - Learning about the structure, requirements, bulletin boards, and etiquette for online courses

- Exploring the Internet and websites; using online resources and research skills

- Evaluating online materials

- Avoiding intentional and unintentional plagiarism

- Exploring new digital devices and apps (applications) for tablets, iPads, and smartphones

New Topics in the Eighth Edition

The following topics are new for the Eighth Edition, so taking time to familiarize yourself with the topics is recommended.

- **Eight Personality Types:** Chapter 1 now includes descriptions and checklists to estimate individual personality preferences that result in eight possible personality types based on the Myers-Briggs Type Indicator® assessment. A personality preference refers to a way of doing or responding that feels more natural, automatic, or comfortable, and which produces better results in the following four categories: (1) where you focus your attention, (2) how you take in information, (3) how you make decisions, and (4) how you approach or structure your life. Understanding the basic characteristics of the following eight personality preferences provides insight about oneself, friends, and classmates: Extraversion–Introversion, Sensing–Intuition, Thinking–Feeling, and Judging–Perceiving.

- **Time Management and Personality Preferences:** Chapter 2 discusses ways the personality preference styles of Sensing, Intuition, Judging, and Perceiving affect the way students perceive and use time-management strategies.

- **GPS Strategy for Setting Goals:** Chapter 4 introduces a new, simplified strategy for setting goals or creating plans of action. This strategy consists of three steps:

  1. G = Goal   Set a specific, realistic goal with target dates and times.

  2. P = Purpose   Identify the purpose, intention, or significance of the goal.

  3. S = Steps   Identify specific steps to achieve the goal.

- **Twelve Memory Processes:** Chapter 5 identifies twelve specific memory processes that play an active role in developing memory. The twelve processes summarize important information, but do not need to be memorized or learned as a set of twelve processes. These processes include: selective attention, deeper levels of encoding, immediately working with stimuli, Magic 7 ± 2 Theory, schemas, factual and procedural information, elaborative rehearsal, multisensory strategies, selectivity, feedback, associations and retrieval cues, and not rushing the learning process.

- **Six Forgetting Theories:** Chapter 6 includes information that explains why forgetting sometimes occurs in our information processing system and memory. The seventh edition had one excerpt in Appendix D that discussed five forgetting theories; for the Eighth Edition, the Emotional Blocks Theory has been added to

explain why some learned information cannot be accessed or located in long-term memory.

- **Outline Reading System:** In Chapter 8, students learn to use an outline reading system by creating informal outline notes during the reading process. These notes become excellent guides for reciting information, writing summaries, and using as review tools.

- **Organizational Patterns and Graphic Materials:** Chapter 10 uses an integrative skills approach with the organizational patterns. After reading the new paragraph examples, students annotate and create diagrams to show the details. In the graphic materials section, new graphics to analyze are followed by comprehension and discussion questions.

- **An Effective Listening Plan:** Chapter 11 introduces students to a listening plan that helps increase the quality of listening experiences. The steps include: (1) attitude, (2) purpose, (3) image, (4) depth, (5) notes, (6) refocus, (7) feedback, and (8) open-ended, closed, probing, and leading questions.

- **Top Twenty Technology Picks:** Lucy MacDonald, an expert in online education and digital materials, offers her top twenty technology picks for students to explore. This resource in Chapter 12 provides students with a variety of applications, videos, and comprehensive websites to enhance the use of technology.

- **Online Chapter Study Guides:** Comprehensive Chapter Study Guides (available only online) require students to return to the chapter to use the "cloze reading technique" that requires students to locate specific words to complete statements. The Study Guides also include closed and open-ended questions for topics throughout the chapter. These study guides provide a thorough review of chapters.

What's Revised in the Eighth Edition
of *Essential Study Skills*

Examples, exercises, and excerpts are updated with more current topics to engage students in the study skills processes and to better prepare them for a broader range of academic challenges that they will encounter in their classes. More details about revisions are available on the **Instructor Website, Transitioning to the Eighth Edition**. The following chart summarizes major revisions.

Revisions to the Eighth Edition

Early Introduction of Critical Thinking Skills and New Activities	*Teaching students to think on higher levels, to interpret, to evaluate, and to apply what they are learning to other content areas as well as to their personal lives is emphasized in each chapter.* • Critical thinking now introduced in Chapter 2 • New Critical Thinking activities for each chapter

Transfer These Skills Activities	*Teaching students to transfer skills to other courses is valuable and essential for meaningful, long-term learning. New exercises to transfer skills include:* • Chapter 1: Using the See-Say-Do Strategy • Chapter 2: Personalizing the Self-Efficacy Cycles • Chapter 3: Prioritizing and Creating a Task Schedule • Chapter 4: Planning a Term-Long Project • Chapter 5: Drawing Semantic Networks and Schemas • Chapter 6: Using The Loci Method • Chapter 7: Developing Summary Notes and a 5-Day Study Plan • Chapter 8: Surveying a Chapter and Applying SQ4R • Chapter 9: Applying Vocabulary Skills • Chapter 10: Creating a Visual Mapping • Chapter 11: Developing Two-Column Notes and PowerPoint Notes • Chapter 12: Conducting Internet Searches
Appendix A: Essential Test-Taking Skills	*Being prepared for tests and knowing how to perform well on tests are valuable skills for all college students.* • Appendix A has been condensed to fifty-two strategies. • The strategies in Appendix A are reinforced throughout the textbook. Each Check Point quiz and Chapter Review quiz refers students to specific strategies in Appendix A for responding to the type of question posed in the quiz.
The Information Processing Model	*Metacognition involves understanding the basic processes involved in learning and developing memory.* • The memory model has been condensed and is now presented in a more direct, easy-to-understand model. • Twelve memory processes reinforce the processes used in the Information Processing Model and working memory.
Bloom's Taxonomy	*Understanding and using the six cognitive levels in Bloom's Taxonomy is a foundation for critical thinking skills.* • Emphasis in Chapter 2 is on the six revised levels in Bloom's Taxonomy: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. • A website appears in the Twenty Top Technology Picks for students to explore descriptions and prompt words for questions.

Revised Critical Thinking Activities

Each chapter ends with a Critical Thinking activity that you can use for class or small group discussions or for homework writing assignments. These activities are open-ended and engage students in the process of paying closer attention to the integration of concepts, to relationships beyond those stated in the textbook, and to analysis of information they are studying.

- **Chapter 1 Critical Thinking:** Examine the fairness of employers using personality tests to find applicants who fit specific jobs. A new excerpt, "Personality Tests Help Employers Find Applicants Who Fit," is included.
- **Chapter 2 Critical Thinking:** Discuss relationships among cognitive learning styles, multiple intelligences, and personality types described in Chapter 1.
- **Chapter 3 Critical Thinking:** After reading a new excerpt, "The Power of Chunking," define the term and compare and contrast the processes of *chunking up* and *chunking down.*
- **Chapter 4 Critical Thinking:** Use Excerpt 3 in Appendix D, "Adopting a Healthy Lifestyle," for writing long-term, intermediary, short-term, and immediate goals applicable to the content of the excerpt.
- **Chapter 5 Critical Thinking:** Select one of several multisensory options to *create* a product that shows understanding of the Twelve Principles of Memory.
- **Chapter 6 Critical Thinking:** Identify relationships between the Twelve Principles of Memory and the three memory centers introduced in Chapter 5; identify ways each principle of memory activates other principles of memory.
- **Chapter 7 Critical Thinking:** Write practice test questions using all six levels in Bloom's Taxonomy. Questions may be discussed in class, presented as a review activity, or used on an upcoming test.
- **Chapter 8 Critical Thinking:** Locate an online news article. Use the criterion provided to evaluate the article in terms of reliability, quality, and usefulness.
- **Chapter 9 Critical Thinking:** Apply and create a set of two-column notes for their choice of subject matter.
- **Chapter 10 Critical Thinking:** Apply different forms of test-taking questions to the information in Excerpt 7 in Appendix D, "The Scientific Method."
- **Chapter 11 Critical Thinking:** Read Excerpt 8 in Appendix D, "How to Listen Critically" and the table "Guidelines for Critical Listening," and then compile key words and key actions used in critical reading, critical listening, and critical thinking processes.
- **Chapter 12 Critical Thinking:** Optional activities are designed by the instructor to interact with online discussion boards, Internet research, forums, wikis, blogs, tweets, and mobile device applications.

Features Retained from the Seventh Edition

Instructors who have used previous editions of *Essential Study Skills* will find many familiar features that continue to be an essential part of this student-oriented textbook:

- **Chapter Learning Objectives and Chapter Outlines** provide students with the "big picture" of a chapter before they begin more in-depth reading.
- **Your Chapter Mapping** is a study tool that students expand by adding important details for each heading of the chapter that appears on the visual mapping.
- **Chapter Profiles** provide students with a self-correcting series of ten questions to assess their current attitudes and behaviors at the beginning and at the end of the term.
- **Essential Strategies Charts** that appear throughout each chapter highlight and summarize essential strategies presented in the chapter.

- **Concept Checks** in the margins provide students with questions to assess their understanding of concepts discussed in the adjacent paragraphs.

- **Definitions in the Margins** provide students with course-specific definitions for all the key terms that appear in bold colored print.

- **Case Studies** in every chapter present students with real-life student situations to analyze and then suggest strategies to address the problems posed in the case studies.

- **Reflective Writing assignments** provide students with opportunities to personalize the chapter content, discuss their current skills and attitudes, and integrate the chapter's skills with other study skills and personal experiences.

- **Group Processing: A Collaborative Learning Activity** in each chapter provides a small-group activity that enhances student interest and creates a forum for student interaction, brainstorming, discussion, problem-solving, critical thinking, and cooperative work.

- **Student exercises** reinforce skills that appear throughout each chapter. Instructors may select appropriate exercises to use for homework assignments, class discussions, or for small-group activities in the classroom. Answer keys appear in the Instructor Resource Manual; students do not have access to answer keys for exercises.

- **Check Points at the end of each main heading** provide students with several questions to assess how well they comprehended the textbook information. Students can refer to Appendix A if they need help answering specific kinds of questions. Students self-correct by using the answer keys in Appendix B.

- **Practice and Enhanced Quizzes in the College Success CourseMate** provide students with additional practice working with course content and test-taking skills. Quizzes are scored online and can be repeated multiple times.

- **Learning Objectives Review** at the end of each chapter uses bulleted points to summarize the most important points for each of the chapter's objectives.

- **Terms to Know** identify the key terms in the chapter that students need to be able to define.

- **Chapter Review Questions** provide students with a tool to assess their understanding and recall of essential concepts, skills, and strategies discussed in the chapter. Answer keys appear in Appendix B.

- **Appendix A** provides students with a comprehensive resource for developing test-taking skills. The direct, step-by-step approach for true-false, multiple-choice, matching, fill-in-the-blanks, listing, definition, short answer, math, and essay test questions is easy to use.

- **Appendix B** provides students with answers to their Profile Charts, a Master Profile Chart to record their results, and answer keys for Check Point quizzes and Chapter Review questions.

- **Appendix C** provides students with an array of exercises and self-assessment inventories or checklists to use to assess their strengths and weaknesses and adjust their strategies.

- **Appendix D** gives students the opportunity to apply critical thinking and study skills to materials that originated in a variety of textbooks from across the curriculum.

Dedication

I dedicate this new edition to the thousands of educators who demonstrate an endless commitment to providing high-quality, valuable educational experiences for their students, and to all students who strive to excel and benefit from their educational opportunities.

Acknowledgments

My appreciation is extended to the following reviewers who dedicated their time and expertise to contribute ideas to enrich this textbook and further strengthen the effectiveness of this instructor-friendly and student-friendly textbook. Thank you all for your contributions: Melanie Abst, Cynthia Avery, Judith Colson, Valerie Cunningham, Karen Fenske, SusAnn Key, Lucy MacDonald, Pamela Moss, Janet Moynihan, Amanda Nimetz, Brenda Wallace, and Alice Warner.

I extend my sincere appreciation for the outstanding editorial and production staff that has worked diligently with me through all the phases of creating the Eighth Edition of *Essential Study Skills*. Most readers of this textbook are unaware of the high degree of coordination, teamwork, time commitment, and resources required to produce a new edition of a textbook and all its companion resources. The process is extensive and requires the utmost attention to details. I acknowledge your level of dedication and your utmost commitment to the development of this Eighth Edition. I appreciate and value you for your contributions. Thank you!

To the Student

Essential Study Skills, Eighth Edition is a valuable resource designed to provide you with an array of study skills strategies that will unlock your learning potential and empower you to improve your academic performance. Reading the following section carefully will provide you with important information that explains how to get the most out of *Essential Study Skills,* Eighth Edition.

Quick Start Checklist

Go to the College Success CourseMate for a Quick Start Checklist to use to prepare for an upcoming term. Look for the Quick Start Checklist link on the left side of the home page screen. Click on it to learn about the following topics:

- Creating class schedules
- Familiarizing yourself with your campus
- Organizing your notebooks
- Selecting a system to record homework assignments
- Getting off to a good start on the first day of class
- Planning sufficient study time for your classes
- Other suggestions and tips for getting off to a good start

> **Steps to Access the College Success CourseMate**
> Go to *CengageBrain.com* to access these resources, and look for this icon to find resources related to your textbook in College Success CourseMate. You will be prompted to enter the required CourseMate access code. If you do not have an access code, you will be able to purchase one at *CengageBrain.com*.

Starting the Term: Getting an Overview

As soon as you purchase this book, begin familiarizing yourself with the textbook. Read through the **Preface** and this introductory **To the Student** section carefully, examine the **Table of Contents**, and familiarize yourself with the end matter that follows Chapter 12: **Appendix A:** Essential Test-Taking Skills; **Appendix B:** Master Profile Chart and Answer Keys; **Appendix C:** Exercises, Inventories, and Checklists; **Appendix D:** Excerpts; and the textbook **index**.

    Essential Study Skills, Eighth Edition, has a College Success CourseMate to enhance your learning experience and strengthen your understanding of course materials. Each time you see this icon in your textbook, visit the College Success CourseMate for interactive quizzes and online materials. Your instructor may assign these activities, or you may complete the activities independently to strengthen your comprehension and learn content more thoroughly. Take time now to familiarize yourself with the wealth of online resources available to assist you throughout the term. As you click on the main menu for each chapter, you will see the following categories of your online materials:

- Chapter E-Book
- Chapter Profile
- Chapter Visual Mapping
- Expanded Chapter Outline

- Chapter Concept Checks
- Reflective Writing Assignments
- Textbook Case Studies
- Topics In-Depth
- Practice and Enhanced Quizzes
- Chapter Study Guide
- Glossary
- Flashcards

Essential Study Skills E-Book

The College Success CourseMate for *Essential Study Skills,* Eighth Edition, has an interactive e-book for you to use with this textbook. If you have not yet experienced using an e-book, you are in for an exciting new learning experience! You can go to Chapter 8, pages 255–258 to learn about reading e-books and the Chapter 8 online Topics In-Depth to learn more about this book's e-textbook and the online features associated with it.

Starting Each Chapter

Surveying is an effective study strategy that provides you with an overview of a chapter before you begin the process of careful reading. Surveying familiarizes you with the topic, creates a mindset for studying, and prepares your memory to receive new information. Use the following steps for surveying a new chapter:

1. Read the *Chapter Objectives* that list learning goals or objectives for the chapter. The chapter objectives clearly indicate the skills you will learn and will be able to demonstrate when you finish studying the chapter. The color-coding used for the chapter objectives correlates with the color-coded headings throughout the chapter.

2. Read through the *Chapter Outline* for an overview of the organization and content of the chapter. You will find an expanded chapter outline on CourseMate.

3. Glance at the main topics in the *Your Chapter Mapping* to get a clear, visual image of the main headings in the chapter. After reading the chapter information under a heading, return to your visual mapping. Attach key words to show subheadings and important details for each heading on the visual mapping.

4. Complete the *Chapter Profile* before continuing to survey the chapter. This is not a graded assignment; answer the questions honestly. The profiles are designed to examine your current attitude and habits in specific skill areas. These scores will be compared to end-of-the-term scores to show your progress and growth. You can complete the profile in the textbook, or you can complete it online in the College Success CourseMate.

5. Survey or skim through the chapter by examining the following items and features:

   - All of the bold *headings* and *subheadings*
   - The *information in the margins,* which includes Concept Check questions and definitions of terminology

- *Terminology* that appears in bold colored print in paragraphs
- *Graphic materials,* which include figures and charts
- *Check Point questions* at the end of information under each main heading

6. Read the *Learning Objectives Review* at the end of the chapter. Key points for each of the objectives provide you with additional insights about the content of the chapter.

7. Read through the *Terms to Know* that lists the course-specific terminology. The definitions for these terms appear in the margins of the chapter.

8. Read through, but do not answer, the *Chapter Review Questions*. Plan to answer these questions after you have read the chapter carefully. For immediate feedback, you will be able to check your answers with the answer keys in Appendix B.

Using Chapter Features

The following chapter features are designed to increase your comprehension and reinforce key concepts and skills in each chapter. Using these features consistently facilitates the process of mastering the concepts and skills in the chapter.

Your Chapter Mapping shows you the basic skeleton or topic and the main headings used in the chapter. To create a visual study tool, expand the chapter visual mapping by connecting key words to show important details for each of the main headings. Chapter visual mappings also appear in the College Success CourseMate.

Definitions in the margins provide a quick view of key terminology and definitions to learn. Review these definitions when you study for tests. Practice reciting the full definition without looking at the textbook, and then check the accuracy of your definition.

Concept Checks in the margins provide you with study questions to assess your comprehension and promote critical thinking skills. For each Concept Check, answer the questions on paper, mentally, or out loud to yourself. At times, your instructor may ask you to write responses, or these questions may be used for short pop quizzes or on chapter tests. Return to these questions when you prepare for tests.

Check Points in each chapter provide you with short assessment tools to check your comprehension of information presented under each main heading in the chapter. Refer to the Appendix A strategies to review answering specific kinds of questions. Answer keys in Appendix B provide you with immediate feedback.

Exercises appear throughout each chapter. Your instructor will assign some, but usually not all, of the exercises in the chapter. Notice that some exercises appear in the chapter, and other longer exercises appear in Appendix C. For practice and enrichment, you may complete any of the exercises that your instructor does not assign you to complete.

Case Studies are exercises that describe student situations or problems. After reading a case study, identify the key issues or problems that appear in the case study. Answer the question at the end of each case study by providing specific answers or suggestions that deal with the problem. Use specific strategies and terminology

from the chapter in your answers. Case studies use open-ended questions, meaning there are many possible answers. They can be completed on paper or in your College Success CourseMate.

Practice Quizzes in the College Success CourseMate consist of self-correcting quizzes that provide you with additional practice and reinforcement of the skills in the chapter. You can complete these quizzes as many times as you wish. You will receive feedback and brief explanations with each answer.

Essential Strategy Charts highlight key strategies to use to improve the way you study, process information, and master course content. Applying the essential strategies in these charts will increase your performance and academic success. Refer to these charts when you want to brush up on essential study skills or review for tests.

Terms to Know list the course-specific vocabulary terms that you should know how to define. Practice defining these terms. You can go to the College Success CourseMate to practice flashcards and to review the online glossary.

Chapter Review Questions provide you with practice test questions to assess your memory or recall of chapter concepts and key terms. Refer to the Appendix A strategies to review answering specific kinds of questions. Complete the Chapter Review Questions without referring to your textbook pages or your notes. Check your answers with the answer keys in Appendix B.

Enhanced Quizzes in the College Success CourseMate provide you with additional practice answering objective test questions and assessing your level of comprehension of chapter skills and concepts. The Enhanced Quizzes link you to the heading in the e-textbook that covers the content of the quiz question.

Chapter Study Guides in the College Success CourseMate provide you with a detailed study guide to complete for a thorough review of each chapter.

Appendix A: Essential Test-Taking Skills

Many college students feel overwhelmed and underprepared for the variety of test-taking situations and test questions that they encounter in their courses. Do you experience any of the following test-taking issues or concerns?

- *Do you sometimes struggle with taking tests because you have never really learned how to take tests?* Appendix A provides you with a direct, step-by-step approach as well as clear explanations and examples for learning fifty-two essential test-taking strategies.

- *Do you sometimes have difficulty answering certain kinds of test questions?* Easy-to-use strategies provide you with the skills to answer true-false, multiple-choice, matching, fill-in-the-blanks, listing, definition, short-answer, math, and essay test questions.

- *Do you sometimes have difficulty understanding or interpreting questions?* Through easy-to-read bulleted points, Appendix A teaches you strategies for reading, understanding, and interpreting objective, recall, math, and essay test questions.

- *Do you sometimes get confused and waste valuable test-taking time trying to figure out how to move through a test?* In Appendix A, you will learn the value of using systematic approaches for answering questions. These approaches increase your accuracy rates and lead to higher grades on tests.

Appendix A, the Essential Test-Taking Skills guide, is a valuable resource that provides a flexible format for acquiring essential test-taking skills whenever the need arises. You can use this pull-out guide for independent study at any time during the present or future terms to prepare for upcoming tests. You may go directly to a specific section in Appendix A to prepare for a specific kind of test or to answer questions in the textbook's **Check Points** and **Chapter Review Questions.**

Your instructor will provide you with additional information about using Appendix A. Your instructor may choose to discuss Appendix A in conjunction with Chapter 7, "Preparing for Upcoming Tests," or your instructor may choose to discuss Appendix A at a different time during the term. Refer to your course syllabus or list of chapters and topics for the term.

Appendix B: Answer Keys

Use **Appendix B** to score and chart your **Chapter Profile** questions, and use the chapter answer keys for all **Check Points** and **Chapter Review Questions.**

Appendix C: Exercises, Inventories, and Checklists

For some exercises in the textbook chapters, you will be directed to **Appendix C.** Follow the directions for completing the exercises, inventories, and checklists. Use these self-assessment tools to strengthen your study skills strategies and improve your approaches to learning.

Appendix D: Excerpts

For some exercises, you will be directed to **Appendix D** to use excerpts from a variety of content areas to practice reading, annotating, notetaking skills, and other textbook study skills.

A Note to You from the Author

Your goal is not to learn *about* study skills, but to learn to *use* powerful study skills to consistently achieve your goals and experience success. Learning is a lifelong process. Each time you are faced with a new learning situation—whether at school, at home, or at work—you can draw upon the skills you have learned in this textbook. By applying the skills of time management, goal setting, concentration, processing information, strengthening memory, test taking, reading comprehension, and an array of additional strategies in this textbook, you will be prepared to experience the rewards of success … again and again and again. May my commitment to you, belief in you, and support of you in the learning process be reflected in the pages of this textbook.

—Linda Wong

1 Discovering Your Learning Styles and Preferences

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D o you know your learning style preference, your strongest intelligences, and your personality type? In this chapter, you will gain insights about yourself as a learner. You will learn skills that empower you and utilize your personal preferences so learning feels more natural and effective. By identifying your learning style preference, you are able to select powerful multisensory strategies to increase academic performance. As you explore multiple intelligences, you will realize that you already have skills and abilities in all eight intelligences. Finally, as you explore your personality type, you will gain insights about where you focus your attention and how you take in information, make decisions, and structure your life. After completing this chapter, you will understand more about yourself and about people you encounter at school, at work, and in your personal life.

Access Chapter 1 Expanded Chapter Outline in your College Success CourseMate, accessed through *CengageBrain.com*.

YOUR CHAPTER MAPPING

After reading information under each heading, return to the chapter visual mapping below. Add key words to show subheadings and important details related to each heading.

Access Chapter 1 Visual Mapping in your College Success CourseMate, accessed through *CengageBrain.com*.

Three Cognitive Learning Styles

Multiple Intelligences

Discovering Your Learning Styles and Preferences

Personality Types
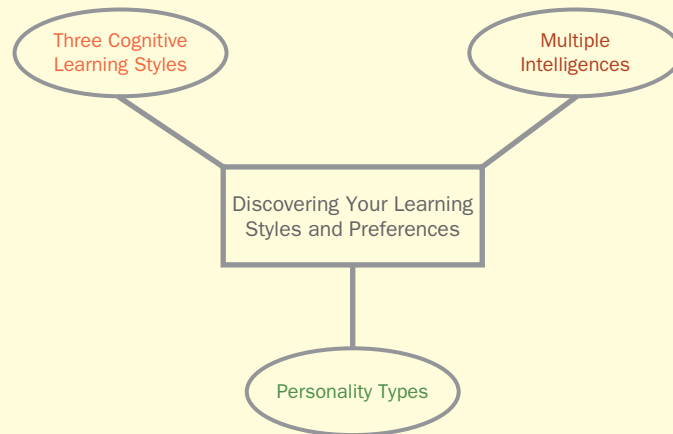
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LEARNING OBJECTIVES

1 *Identify your preferred cognitive learning style and describe learning strategies you can use to utilize your preferred learning style and strengthen your other modalities.*

2 *Define the term* intelligences *and describe the common characteristics of each of Howard Gardner's eight intelligences.*

3 *Identify the eight personality preferences defined by Myers and Briggs and discuss the use of opposite preferences in their theory.*

3

Discovering Your Learning Styles and Preferences

ANSWER each profile question honestly. Your answers should reflect what you do, not what you wish to do. Check YES if you do the statement always or most of the time. Check NO if you do the statement seldom or never.

SCORE the profile. To get your score, give yourself one point for every answer that matches the answer key on page B2 in the back of your book. If you complete the profile online, the profile will be scored for you.

RECORD your score on the Master Profile Chart on page B1 in the column that shows the chapter number.

ONLINE: You can complete the profile and get your score online in this textbook's College Success CourseMate.

Access Chapter 1 Profile in your College Success CourseMate, accessed through *CengageBrain.com*.

	YES	NO
1. I am aware of my learning style preference as a visual, auditory, or kinesthetic learner.	_____	_____
2. I can describe the modality involved in four or more learning strategies that I use on a regular basis.	_____	_____
3. Instead of using a multisensory learning strategy such as the See-Say-Do Strategy, I select one learning activity or process and use that to study material in all of my courses.	_____	_____
4. I usually study new information in a straightforward manner without spending time making creative study or review tools.	_____	_____
5. I recognize which of Howard Gardner's eight intelligences are my strongest.	_____	_____
6. I have the potential to acquire new skills that will increase my abilities in the eight intelligences.	_____	_____
7. I understand the differences between Extraversion and Introversion personality preferences, and I know which preference is mine.	_____	_____
8. I understand how my "Thinking" personality preference or my "Feeling" personality preference affects the way I make decisions.	_____	_____
9. I understand basic ways in which different personality preferences can affect people's attitudes, behaviors, and decision-making processes.	_____	_____
10. I am confident that I can adjust my learning strategies to meet the demands of new learning situations or tasks.	_____	_____

QUESTIONS LINKED TO THE CHAPTER LEARNING OBJECTIVES:

Questions 1–4: objective 1   Questions 7–9: objective 3

Questions 5–6: objective 2   Question 10: all objectives

Three Cognitive Learning Styles

1 *Identify your preferred cognitive learning style and describe learning strategies you can use to utilize your preferred learning style and strengthen your other modalities.*

Learning is an individualized process; different educational and background experiences, personality traits, levels of motivation, and numerous other variables affect the way you learn. The term *cognitive* refers to thinking and reasoning processes, so **cognitive learning styles** refers to the general ways people *prefer* to have information presented in order to problem solve, process, learn, and remember new information. Three commonly recognized cognitive learning styles, or **learning modalities**, are *visual, auditory,* and *kinesthetic.* **Figure 1.1** shows these three main cognitive learning styles.

Learning Style Preferences

Most people have a **learning style preference**, which is a tendency to use a visual, auditory, or kinesthetic modality when there is a choice of ways to learn and process new information. For example, a *visual learner* may prefer to read a manual or a textbook or learn from pictures, charts, or graphs. An *auditory learner* may prefer to be told how a new process or piece of equipment works. A *kinesthetic learner* may prefer to be given an opportunity to perform each step as he or she learns a new process or operation of equipment.

Your learning style preference started in your childhood. As you matured, entered into the educational system, and were exposed to new learning situations, you learned to use, strengthen, and integrate all of your modalities. The childhood modality preference may still be dominant, but as an adult with broadened skills, in most situations, you are able to learn even when information is presented in a form that is not based on your preferred method of learning. Your learning style preference is just that—a preference—and not a limitation as to your ability to process information.

Understanding your cognitive learning style preference can guide your selection of effective learning strategies that capitalize on your strengths, boost your memory, and strengthen your ability to recall information. As you take in and process information, your brain uses visual, auditory, and kinesthetic (motor) codes to accept

Cognitive learning styles refers to the general ways people *prefer* to have information presented in order to problem solve, process, learn, and remember new information.

Learning modalities refers to cognitive learning styles such as visual, auditory, and kinesthetic.

Learning style preference indicates a tendency to use a visual, auditory, or kinesthetic modality when there is a choice of ways to learn and process new information.

CONCEPT CHECK   1.1

In general terms, how do you go about learning something new? What study or learning techniques generally work best for you?

FIGURE 1.1   Cognitive Learning Styles

1. **Visual learners** learn and remember best by *seeing* and *visualizing* information.

2. **Auditory learners** learn and remember best by *hearing* and *discussing* information.

3. **Kinesthetic learners** learn and remember best by using large and small body *movements* and *hands-on experiences*.

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and move the information into different locations in your memory system. The following points are important to understand:

- When you use your strongest modality or your preferred learning style to take in and process information, learning can occur more efficiently and recalling information at a later time may occur more smoothly.

- Many learning strategies involve the use of more than one modality. In other words, more than one kind of coding into memory occurs. Multisensory strategies, such as the *See-Say-Do Strategy* (page 13), utilize all three modalities to process information into memory.

- When you use more than one sensory channel to process information, you create a stronger imprint or impression of the information in your memory, so recalling information often occurs more rapidly and accurately.

- Situations that require you to learn information using one of your less developed learning modalities may be more difficult than anticipated and may require you to activate a modality that does not use your preferred learning style.

Learning Styles Inventory

DIRECTIONS: Go to the Learning Styles Inventory in Appendix C, pages C1–C3, to identify your learning style preference and strength of your modalities. After reading each statement carefully, you will select a YES or a NO answer. Directions for scoring your inventory are included. **Return to this page to write your scores on the following lines:**

_____ VISUAL   _____ AUDITORY   _____ KINESTHETIC

ANALYZING YOUR SCORES:

Highest Score   =   Preferred modality and way to process new information

Lowest Score   =   Weakest or least frequently used modality

Scores > 10   =   Frequently used modality

Scores < 10   =   Less frequently used modality

- If your two highest scores are the same, you use both modalities equally well.
- Your weakest modality and any modalities with scores lower than 10 may be the result of limited experiences that utilize this modality.
- Your weakest modality and any modalities with scores lower than 10 may be due to physical or neurological impairments, which may include learning disabilities.

Characteristics and Essential Strategies

As you read through the following common characteristics for each of the three types of learners or learning style preferences, relate this information to what you learned about yourself in the Learning Styles Inventory (**Exercise 1.1**). Do you have the same or similar characteristics? Note that a person does not necessarily possess

abilities or strengths in all of the characteristics but may instead demonstrate strengths in specific characteristics. Your strengths may reflect your educational or personal background. For example, an auditory learner may be strong in the area of language skills but may not have had the experience or the opportunity to develop skills with a foreign language or music. Finally, pay close attention to the variety of essential learning strategies that you can incorporate into your approach to learning. **Figure 1.2** summarizes essential strategies for each modality.

Visual Learners

Visual learners are learners who prefer to process and learn information in visual forms such as pictures, charts, lists, paragraphs, or other printed formats. They learn and remember best by *seeing* and *visualizing* information. The following are additional characteristics of visual learners:

- Can easily recall information in the form of numbers, words, phrases, or sentences
- Can easily understand and recall information presented in pictures, charts, or diagrams

Visual learners are learners who prefer to process and learn information in visual forms such as pictures, charts, lists, paragraphs, or other printed formats.

FIGURE 1.2	**Essential Strategies for Visual, Auditory, and Kinesthetic Learners**
VISUAL	Highlight textbooks and notes. Write notes in textbooks. Create movies in your mind. Create visual study tools. Use color coding. Visualize information. Add pictures. Write to remember. Make writing a habit. Be observant.
AUDITORY	Participate in discussions. Paraphrase and summarize. Ask questions. Verbalize. Recite frequently. Tape lectures. Create study tapes or recordings. Create rhymes, jingles, or songs. Use technology.
KINESTHETIC	Use hands-on learning. Create hands-on study tools. Get out of the chair. Work standing up. Use action-based activities. Create action-oriented games. Use creative movement. Use a computer or electronic devices.

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- Have strong visualization or visual memory skills and can look up (often up to the left) and "see" information
- Make "movies in their minds" of information they are reading
- Have strong visual–spatial skills that involve sizes, shapes, textures, angles, and dimensions
- Have a good eye for colors, design, visual balance, and visual appeal
- Pay close attention and learn to interpret body language (facial expressions, eyes, stance)
- Have a keen awareness of aesthetics, the beauty of the physical environment, and visual media

Visual learners often favor creating and using visual strategies when they study. Having something that they can *see*, examine for details, and memorize as a mental image is important and effective for visual learners. The following essential strategies for visual learners strengthen and utilize visual skills. Check YES if you already use the strategy. Check TRY if you are willing to try using this strategy. Check NO if the strategy does not interest you. **Check a response for each bulleted point.**

CONCEPT CHECK **1.2**

Visual learners can easily recall which kinds of visual information? What other abilities do visual learners exhibit?

	YES	TRY	NO
Highlight textbooks and notes. Use colored highlighter pens to create a stronger visual impression of important facts, definitions, formulas, and steps.	_____	_____	_____
Write notes in textbooks. Write questions in the margins, highlight the answers, and then picture the answers as you review the questions.	_____	_____	_____
Create movies in your mind. Use your visual memory as a television screen with the information that you read (and hear) moving across the screen as a "movie with the cameras rolling." Practice reviewing or replaying the movie in your mind.	_____	_____	_____
Create visual study tools. Create visual mappings, hierarchies, and comparison charts to show levels of detail. Practice visualizing and recalling the images of the study tools.	_____	_____	_____
Use color coding. Color-code different levels of information in your visual tools, your textbook highlighting, your time management schedules, and your notes. Using different colors facilitates the process of memorizing and recalling visual images.	_____	_____	_____
Visualize information. Visually memorize pictures, graphs, study tools, or small sections of printed information. Practice looking away, visualizing, and then checking the accuracy and details of your visual images.	_____	_____	_____

	YES	TRY	NO
Add pictures. As you expand chapter visual mappings, hierarchies, and other visual study tools or as you review your notes and study tools, add pictures that depict the information. The pictures become association cues to assist recall of the information stored in memory.	_____	_____	_____
Write to remember. Copy textbook information into notes because information written in your own handwriting often is easier to visualize and recall than printed text.	_____	_____	_____
Make writing a habit. Create the habit of writing directions and other important information in notebooks, on small note pads, or in electronic devices as words you write frequently are easier to visually memorize and recall.	_____	_____	_____
Be observant. Pay attention to details of objects and people. Observe nonverbal clues for body language that signal attitudes, feelings, or important points.	_____	_____	_____

Auditory Learners

Auditory learners are learners who prefer to process and learn by hearing and discussing information. They prefer to have information presented to them verbally instead of, or in addition to, in writing. They learn by listening to others explain, debate, summarize, or discuss information about topics they are studying. Auditory learners, however, are not passive. Auditory learners like to *talk* and *listen* as they learn. The following are additional characteristics of auditory learners:

Auditory learners are learners who prefer to process and learn by hearing and discussing information.

- Often engage in discussions and enjoy the process of communication
- Learn by explaining information in their own words, expressing their understanding or opinions, and providing comments and feedback to other speakers
- Can accurately remember details or specific information heard in conversations, lectures, movies, or music
- Have strong language and vocabulary skills and an appreciation of words, their meanings, and their etymology (word history)
- Have strong oral and expressive communication skills and are articulate
- Have "finely tuned ears" and may find learning a foreign language relatively easy
- Have above average ability to hear tones, rhythms, and notes of music, and often excel in areas of music
- Have keen auditory memories

Auditory learners often select learning strategies that code or process information through their auditory channel into memory. The following essential strategies for auditory learners strengthen and utilize auditory skills. Check YES if you already

use this strategy. Check TRY if you are willing to try using this strategy. Check NO if the strategy does not interest you. **Check a response for each bulleted point.**

	YES	TRY	NO
Participate in discussions. Actively engage in group activities, discussions, study groups, and in tutoring sessions.	_____	_____	_____
Paraphrase and summarize. Express your ideas to others, paraphrase speakers, and summarize what you learn from lectures, conversations, and discussions.	_____	_____	_____
Ask questions. Show your interest and clarify information by asking questions. Practice recalling information and answers that you hear.	_____	_____	_____
Verbalize. Read out loud to activate your auditory channel or auditory processes. For difficult materials, read with exaggerated expression as the natural rhythm and patterns of language tend to group words into units of meaning when spoken.	_____	_____	_____
Recite frequently. Reciting involves stating information out loud, in your own words, in complete sentences, and without referring to printed information. Reciting provides you with feedback to gauge how well you remember and understand information.	_____	_____	_____
Tape lectures. In difficult classes, request permission to tape lectures. Use the tapes to review and complete your notes after class.	_____	_____	_____
Create study tapes or recordings. Tape yourself reading or reciting main ideas, facts, details, or lists. Use your study tapes or recordings to review information and prepare for tests. Your ability to recall information from tapes that have your own voice may strengthen your auditory memory and recall abilities.			
Create rhymes, jingles, or songs. Short, catchy sayings or tunes that contain information you need to remember are effective study tools for recalling information. Original rhymes, jingles, or songs work as mnemonics or memory tools and associations to recall information. To increase accuracy, practice the rhymes, jingles, or songs multiple times.	_____	_____	_____
Use technology. Check with your learning labs, library, Internet resources, and electronic applications for audio materials and products to use to reinforce learning.	_____	_____	_____

Kinesthetic Learners

Kinesthetic learners are learners who prefer to process and learn information through large and small muscle movements and hands-on experiences. Large and small muscles hold memory, so involving movement in the learning process creates muscle memory. The following are additional characteristics of kinesthetic learners:

- Learn best by working with physical objects and engaging in hands-on learning that involves feeling, handling, using, manipulating, sorting, assembling, and experimenting with concrete objects
- Can recall information by duplicating the movement or hand motions involved in the learning process
- Learn well by using large muscle or full body movements, such as movements used when working at large charts, working at a chalkboard or white board, role-playing, dancing, or performing
- Work well with their hands in areas such as repair work, sculpting, and art
- Are well coordinated, with a strong sense of timing and body movements
- Have a strong awareness of their need or interest to add movement to study and work situations
- Are able to focus better when they can engage in movement, which may include wiggling, tapping hands or feet, or moving legs when sitting

Kinesthetic learners often prefer to use strategies that engage their small and large muscles in the learning process. The following essential strategies for kinesthetic learners strengthen and utilize kinesthetic skills. Check YES if you already use this strategy. Check TRY if you are willing to try using this strategy. Check NO if the strategy does not interest you. **Check a response for each bulleted point.**

	YES	TRY	NO
Use hands-on learning. Handle objects, tools, or machinery that you are studying. For processes such as computer applications, repeat the hands-on learning applications several times to create muscle memory.	_____	_____	_____
Create hands-on study tools. Create flash-cards that you can shuffle, spread out, sort, categorize, and review. Copy charts, diagrams, visual mappings, or hierarchies; cut them apart and practice reassembling the pieces.	_____	_____	_____
Get out of the chair. When you study, engage large muscles by using exaggerated hand expressions or body movements. Pace or walk with study materials in hand.	_____	_____	_____
Work standing up. Work at a chalkboard, white board, or flip chart to list, draw, practice, or rework problems. Use poster paper to create study tools, such as large visual mappings, charts, or timelines.	_____	_____	_____

	YES	TRY	NO
Use action-based activities. Create ways to add action to the learning process; for example, if you are studying perimeters, tape off an area and walk the perimeter.	_____	_____	_____
Create action-oriented games. Convert information you are studying into a game such as Twenty-One Questions, Jeopardy, or Concentration. Review the information by playing the game with another student or group.	_____	_____	_____
Use creative movement. When feasible, incorporate drama, dance, pantomime, or role-playing into your study sessions.	_____	_____	_____
Use a computer or electronic devices. Type information and create notes, tables, and charts on the computer. Enter or access information on electronic devices. Keyboard strokes help create muscle memory that you can use to simulate the actions and recall information.	_____	_____	_____

CONCEPT CHECK   **1.3**

Define the terms visual learner, auditory learner, *and* kinesthetic learner. *Describe the characteristics of each type of learner.*

GROUP PROCESSING

A Collaborative Learning Activity

DIRECTIONS:

Form groups of three or four students. Then complete the following directions. Create a chart with three columns. Label the columns *Visual, Auditory,* and *Kinesthetic.* As a group, brainstorm different learning strategies or "things you can do when you study" that capitalize on each of the learning modalities. Use your own experiences and ideas for study strategies as well as ideas presented in this textbook. You may use the following examples to begin your chart.

Visual	Auditory	Kinesthetic
Use colored pens to highlight.	*Talk out loud to study.*	*Make wall charts to review.*

Multisensory Learning Strategies

Multisensory strategies are learning strategies that combine two or more modalities.

Now that you are aware of your learning style and learning preference, you can begin the process of exploring new learning strategies; select some that utilize your strengths and some that help you "stretch" and strengthen your other modalities. As you experiment with the various essential learning strategies, strive to design *multisensory strategies*, strategies that combine two or more

modalities. The incorporation of multisensory strategies benefits you in the following ways:

- You boost your memory by coding information in more than one way or with more than one sensory channel.
- You create stronger sensory paths into long-term memory so information is more clearly imprinted in your long-term memory.
- You create multiple ways to access and recall information at later times. If one recall process does not produce results, you have another process to use to search for information in memory.
- You add motivation and interest to the learning process, and you remind yourself on a regular basis that there is always more than one way to process information.

When you strive to design multisensory learning strategies, frequently you will use the following four common sensory-related processes:

1. **Visualizing** is the process of creating mental images of pictures and colors. Once you memorize or place the images in memory, you must then take time to recall, practice, and rehearse the images.
2. **Verbalizing** is the process of speaking or reading out loud to activate the auditory channel and build auditory memory. Verbalizing involves vocalizing information that you are looking at or reading. Verbalizing is less demanding on memory than reciting.
3. **Reciting** is the process of explaining information out loud, in complete sentences, and in your own words without looking at printed information. Reciting provides immediate feedback as to how well you do or do not understand and remember information. When you are not able to explain information out loud and in your own words, restudy the printed material before repeating the process of reciting.
4. **Developing muscle memory** is a kinesthetic process that involves performing multiple repetitions of steps or actions until the actions become automatic. Copying, assembling, constructing, or performing problem-solving steps are hands-on processes that create automatic muscle memory when practiced repeatedly.

The See-Say-Do Strategy

The **See-Say-Do Strategy** is a multisensory learning strategy that involves visual, auditory, and kinesthetic actions or processes. Using this strategy involves making a conscious effort to create learning combinations that help you *see* the information in new ways, *say* the information you are learning, and *do* some type of movement or hands-on activity. The following example shows how easily you can encode information into memory using three sensory channels.

To learn a process to solve a difficult math problem:

- **See:** Read the math problem and examine the significant details.
- **Say:** Verbalize the steps for a solution.
- **Do:** Copy the steps into your notes.
- **See:** Color-code each step.
- **Say:** Recite the problem-solving steps for the problem.
- **Do:** Rework the problem multiple times. Check your accuracy.

Visualizing is the process of creating mental images of pictures and colors.

Verbalizing is the process of speaking or reading out loud to activate the auditory channel and build auditory memory.

Reciting is the process of explaining information out loud, in complete sentences, and in your own words without looking at printed information.

Developing muscle memory is a kinesthetic process that involves performing multiple repetitions of steps or actions until the actions become automatic.

See-Say-Do Strategy is a multisensory learning strategy that involves visual, auditory, and kinesthetic actions or processes.

CONCEPT CHECK 1.4
Why are multisensory strategies so effective? Give an example of using a See-Say-Do approach for a specific learning task.

Transfer These Skills: Using the See-Say-Do Strategy

DIRECTIONS:

1. Look at the following examples of students using the See-Say-Do Strategy.

   Mark reviews a section of a chapter by:
   Visual: looking at the ceiling to mentally recall textbook pictures and graphs
   Auditory: reciting information about each visual image
   Kinesthetic: redrawing diagrams from memory and checking his accuracy

   Lisa uses the following strategies to write reports and essays:
   Visual: creates an outline or organizational chart for her writing assignment
   Auditory: reads her work out loud or asks someone to read it to her
   Kinesthetic: types her papers

2. **Transfer These Skills:** On separate paper, describe a learning process or activity that you have to do for one of your classes. Then identify how you can use the See-Say-Do Strategy. What can you do that is visual? Auditory? Kinesthetic? Describe your process.

3. **BONUS CHALLENGE:** Solve the following problem. Pay attention to the approach you use to find the answer.

   A parent and a child are standing together on the sidewalk. They both start walking at the same time. Each person begins the first step with the right foot. The child must take three steps for every two steps the parent takes. How many steps must the child take until they both land again on the same foot?

   - How many steps did the child need to take?
   - Did they both land on the right foot or the left foot?
   - How did you solve this problem?

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Diverse Learners in the Classroom

In every one of your classrooms, you can be assured that you are a member of a diverse group of learners. Students with visual, auditory, and kinesthetic learning style preferences sit side by side, taking in and processing information differently. Different learning styles and learning preferences partially explain why some students seem to grasp information more readily while other students struggle with making sense of new information.

Instructors' teaching styles often reflect their own individual learning styles and preferences. Historically, the American approach to education favored visual learners. As instructors learned new teaching methods and perhaps even modified their learning style preferences, many instructional approaches became more multisensory and better suited to meeting the needs of those with different

learning styles. However, at some point, you will find yourself in a classroom with an instructor whose teaching style differs from your learning style preferences. To do well in such classes, you will need to vary your learning strategies to adjust to the instructor, the classroom approach, and the materials. Your goal as an adult learner is to increase your ability to perform well in a wide range of learning situations.

When you have the option, consider the following suggestions for identifying courses and instructors that are compatible with your learning style preferences:

1. Before enrolling in a course that offers several sections with different instructors, talk to other students, instructors, and counselors to learn more about the teaching and classroom styles of each instructor. *If you have a choice,* enroll in the section with the instructor who seems most compatible with your learning styles and preferences.

2. Find out what support services are available for the course. Are there study guides, study groups, supplemental computer instruction, videos, or tutors available? If so, use them.

3. Find out what forms of assessment are used in the course. Are grades based solely on tests or do grades include group or individual projects, assignments, or portfolios?

CHECK POINT 1.1

True or False? See Test-Taking Strategies 1–9 in Appendix A.

_____ 1. The term *cognitive* refers to people's awareness of their surroundings.

_____ 2. To be considered a "visual learner," one must possess all the characteristics of a visual learner, have strong visualization skills, and make movies in his or her mind during the reading process.

_____ 3. To some degree, a person's learning style preference reflects his or her personal background and educational experiences.

_____ 4. Having a learning style preference means that a person is strong in only one of the three cognitive learning styles.

_____ 5. Multisensory learning strategies include some form of learning that involves two or all three learning modalities.

_____ 6. The three cognitive learning styles are hands-on, visual, and kinesthetic.

_____ 7. The See-Say-Do Strategy is a multisensory approach that seldom incorporates more than two cognitive learning styles or modalities.

_____ 8. *Reciting* and *verbalizing* are two terms used for the same process that basically means a person talks out loud.

Access Chapter 1 Practice Quiz 1 in your College Success CourseMate, accessed through *CengageBrain.com.*

Textbook Case Studies

DIRECTIONS:

1. Read each case study carefully. Respond to the question at the end of each case study by using *specific* strategies discussed in this chapter. Answer in complete sentences.

2. Write your responses on paper or online in this textbook's College Success CourseMate, Textbook Case Studies. You will be able to print your online response or e-mail it to your instructor.

CASE STUDY 1: Elaine is an outgoing person who does not know anyone on campus. Consequently, she usually studies alone in the library. She knows that she is an auditory learner. Her midterm grades confirmed that she is having difficulty retaining information. Her motivation and interest in her classes are declining. What learning strategies can Elaine use to combat the problems she has encountered in the first half of this term?

CASE STUDY 2: Conor is enrolled in a poetry class to complete one of his program requirements. He has never enjoyed poetry, but this class is even more challenging for him because there is little activity or interaction in class. Students take turns reading verses, and then individual students are called on to answer questions posed by the instructor. Conor is an athlete and is not used to sitting in what seems to be an inactive environment. One student suggests that he switch to a different section with a different instructor. What type of classroom environment and teaching approach would be better suited for this kinesthetic learner?

Access Chapter 1 Textbook Case Studies in your College Success CourseMate, accessed through *CengageBrain.com.*

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Multiple Intelligences

2 *Define the term* intelligences *and describe the common characteristics of each of Howard Gardner's eight intelligences.*

Traditional intelligence, or IQ (intelligence quotient), tests basically measure linguistic, logical-mathematical, and spatial abilities. The Stanford-Binet Intelligence Scale is an intelligence test that consists of verbal and nonverbal questions for different age groups. The results of the test provide a single IQ score for the individual. The Wechsler Intelligence Scale is another test used to measure intelligence and yields a general intelligence score. IQ scores are derived by comparing a person's mental age to his or her chronological age. An IQ of 100 (an average IQ) means that chronological age equals mental age.

In 1983, Howard Gardner, a noted Harvard University psychologist, presented a new theory of cognitive development in his book *Frames of Mind: The Theory of Multiple Intelligences.* Gardner's **Theory of Multiple Intelligences** (MI) is a cognitive theory that proposes that individuals have at least eight kinds of intelligences. According to Gardner, an **intelligence** is the potential to take in and process information that can then be used or activated to solve problems or create products that are valued in a specific culture. Gardner established specific scientific criteria to identify seven intelligences; however, in 1996, Gardner used the same criteria

Theory of Multiple Intelligences is a cognitive theory that proposes that individuals have at least eight kinds of intelligences.

An **intelligence** is the potential to take in and process information that can then be used or activated to solve problems or create products that are valued in a specific culture.

FIGURE 1.3   The Eight Intelligences in Gardner's MI Theory

- Linguistic
- Musical
- Logical-mathematical
- Spatial
- Bodily-kinesthetic
- Intrapersonal
- Interpersonal
- Naturalist
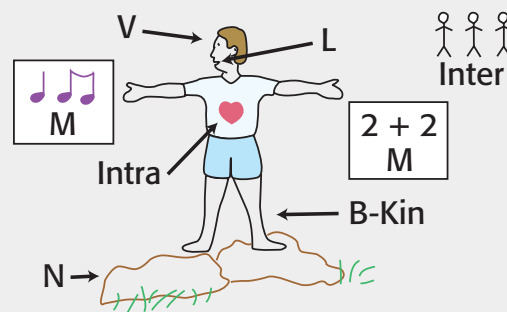
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to identify and add an eighth intelligence, *naturalist*. He contends that additional intelligences could be identified in the future. **Figure 1.3** shows Howard Gardner's eight intelligences. In the Theory of Multiple Intelligences, people have the potential to be wise or "smart" in eight areas: *words, numbers, music, body, pictures, people, self,* and *nature.*

Gardner's MI theory of eight kinds of intelligence challenges traditional IQ theory that basically measures intellectual abilities in three areas: verbal, visual–spatial, and logical mathematics. Gardner's MI theory differs from the IQ theory in other ways as well. **Figure 1.4** shows the major differences between traditional IQ theory and Gardner's MI theory.

Howard Gardner's Theory of Multiple Intelligences has opened new doors to understanding and acknowledging individual differences, skills, abilities, and interests. The MI theory recognizes that most people have some degree of each of the

CONCEPT CHECK   1.5
What abilities does Gardner's Theory of Multiple Intelligences (MI) include that are not directly assessed in traditional IQ theory? In what other ways does MI theory differ from traditional IQ theory?

FIGURE 1.4   Traditional IQ and Multiple Intelligences

Traditional Intelligence Quotient	Gardner's Multiple Intelligences
• Intelligence involves problem-solving, memory, reasoning, and cognitive skills.	• Intelligence involves more than problem-solving, memory, reasoning, and cognitive skills; it involves the ability to solve problems and create products of value.
• IQ measures ability in three areas: verbal, visual-spatial, and logical mathematics.	• MI theory recognizes eight intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, intrapersonal, interpersonal, and naturalist.
• IQ tests may be culturally biased and not recognize impact of cultural values, languages, and experiences.	• MI theory recognizes the significance of cultural settings and that different skills are valued in different cultures.
• The level of ability is summed up in one number or score.	• Intelligences are *potentials* and cannot be summed up in one number or score.
• Intelligence level is established and static.	• Intelligences may be strengthened by opportunities and experiences.
• IQ theory is established by empirical evidence and standardized forms of assessment.	• MI theory is not established by traditional empirical evidence or standardized forms of assessment.

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You possess interests, abilities, and learning styles unique to you. Learning to use your strengths and apply your abilities increases your academic performance. How do you use your talents, interests, and learning styles in your courses?
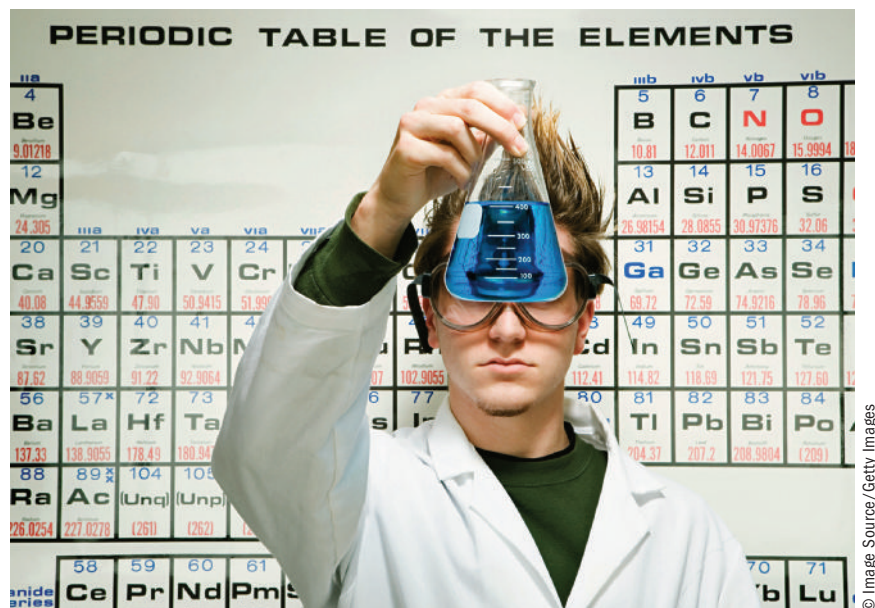
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intelligences and that some intelligences are more developed than others. By making a conscious effort to activate your potential, capitalize on new experiences, and engage in new opportunities, you can strengthen your intelligences as you problem solve and create products of value.

Subintelligences

Subintelligences are core abilities that are part of a larger individual intelligence.

Gardner states that **subintelligences** are *core abilities* that are part of a larger individual intelligence. Each of the eight intelligences has subintelligences. For example, people can exhibit many different talents and abilities under the category of musical intelligence. Due to lack of opportunity, experiences, or training, a person with a high musical intelligence at a given time may not demonstrate a high level of all of the subintelligences of music. Singing, playing different instruments, composing, conducting, critiquing, and appreciating a variety of music require different skills, abilities, and processes. The level of accomplishment or mastery of subintelligences will vary among individuals, but the *potential* exists to activate, develop, and strengthen the various subintelligences of each intelligence. In the following sections, you will have the opportunity to examine which core abilities you feel are well developed in you.

Linguistic Intelligence

Linguistic intelligence is the ability to use verbal and written language effectively.

Linguistic intelligence is the ability to use verbal and written language effectively. Following are common subintelligences (core abilities) of this intelligence. **Check the core abilities you believe are well developed in you.**

_____ Have a love of language—a curiosity, fascination, and sensitivity to words, their meanings, their ability to evoke feelings, and their usages (semantics)

_____ Have an interest in the structure of language (syntax)

_____ Appreciate and show interest in the sounds used in a language (phonology)

____Have sharp, detailed, and vivid memories about written or spoken language

____Excel in word games such as crossword puzzles, Words with Friends, or Scrabble

____Show an ability to create, recite, and remember puns, jingles, or poetry

____Show an ability to learn and speak foreign languages

____Express ideas well in public (presentations, storytelling, or debates)

____Express ideas well in writing (novels, articles, journals, prose, or poetry)

> Following are common career options for people with strong linguistic intelligence:
>
> author, journalist, editor, blogger, poet, newscaster, television announcer, motivational speaker, playwright, politician, consultant, lawyer

Logical-Mathematical Intelligence

Logical-mathematical intelligence is the ability to use logic, problem solving, analysis, and mathematical calculations effectively. Following are other subintelligences (core abilities) for logical-mathematical intelligence. **Check the core abilities you believe are well developed in you.**

____Use logic and sound reasoning to problem solve

____Use pattern identification and sequential thinking

____Think both concretely and abstractly

____Understand and apply abstract numerical symbols and operations

____Perform complex calculations

____Use systematic, logic-based, sequential problem-solving techniques

____Use scientific methods to measure, hypothesize, test, research, and confirm results

> Following are common career options for people with strong logical-mathematical intelligence:
>
> mathematician, math or business teacher, scientist, computer programmer, accountant, tax expert, banker, researcher

Musical Intelligence

Musical intelligence is the ability to show an acute sensitivity and appreciation of musical patterns and elements, such as pitch, timbre, and harmony. People with these developed abilities may use vocal or instrumental music to express creativity, imagination, and the gamut of human emotions. Following are other

Logical-mathematical intelligence is the ability to use logic, problem solving, analysis, and mathematical calculations effectively.

Musical intelligence is the ability to show an acute sensitivity and appreciation of musical patterns and elements, such as pitch, timbre, and harmony.

subintelligences (core abilities) for musical intelligence. **Check the core abilities you believe are well developed in you.**

_____ Are able to read and write (compose) music

_____ Understand music theory and symbols in music

_____ Have a passion for different types and structures of music

_____ Have a strong auditory memory for verbal information

_____ Have a strong auditory memory for musical information and lyrics

_____ Appreciate various forms of musical expression: singing, chanting, humming, or drumming

_____ Exhibit the ability to sing

_____ Exhibit the ability to play musical instruments

> Following are common career options for people with strong musical intelligence:
>
> music teacher, composer, conductor, performer, sound engineer, filmmaker, music, marketing, or advertising director

Bodily-Kinesthetic Intelligence

Bodily-kinesthetic intelligence is the ability to use precise body rhythms and movements, motor coordination skills, and other skills such as timing, balance, and flexibility. People with high bodily-kinesthetic intelligence often prefer hands-on or activity-oriented tasks. Following are other subintelligences (core abilities) for bodily-kinesthetic intelligence. **Check the core abilities you believe are well developed in you.**

_____ Possess dexterity and possibly above average strength or speed

_____ Have well-developed gross (large) motor skills

_____ Are able to judge how their bodies will respond to certain situations

_____ Are able to fine-tune and train their bodies to perform at higher levels

_____ Have well-developed fine (small) motor skills

_____ Engage in activity-oriented or hands-on activities

_____ Work well with their hands to create, modify, or fix objects

_____ Have an acute sensitivity "through their hands"; for example, a mechanic unable to see inside an engine is able to locate and fix a problem using only touch

_____ Enjoy physical exercise, sports, dancing, drama, role-playing, inventing, building, and repairing things

Bodily-kinesthetic intelligence is the ability to use precise body rhythms and movements, motor coordination skills, and other skills such as timing, balance, and flexibility.

Following are common career options for people with strong bodily-kinesthetic intelligence:

dancer, athlete, actor, musician, instrumentalist (guitarist, drummer, pianist), dance teacher, choreographer, photographer, mime artist, painter, sculptor, surgeon, inventor, craftsperson

Spatial Intelligence

Spatial intelligence is the ability to use keen perceptions of patterns, shapes, textures, and visual skills. People with developed spatial intelligence often demonstrate strong visual memory skills. Following are other subintelligences (core abilities) for spatial intelligence. **Check the core abilities you believe are well developed in you.**

_____ Perceive sizes, geometric forms, lines, curves, and angles accurately and with precision

_____ Possess strong visual imagery or visualization skills

_____ Show creativity and active imagination

_____ Able to present ideas graphically in the form of pictures, blueprints, or charts

_____ Visualize abstract concepts; for example, a gifted chess player can play a challenging game of chess blindfolded or an architect can picture the floor plans of a building before drawing them

_____ Show interest and abilities in the areas of fine arts, such as painting, sculpting, drawing, drafting, or photography

Spatial intelligence is the ability to use keen perceptions of patterns, shapes, textures, and visual skills.

Following are common career options for people with strong spatial intelligence:

architect, designer, interior decorator, artist, painter, sculptor, fashion designer, landscaper, carpenter, contractor, graphic artist, advertiser, cartographer, inventor, pilot, surgeon

Interpersonal Intelligence

Interpersonal intelligence is the ability to use effective communication, social, leadership, and cooperative teamwork skills. Individuals with strong interpersonal intelligence relate well to a diversity of people in a variety of situations. Following are other subintelligences (core abilities) for interpersonal intelligence. **Check the core abilities you believe are well developed in you.**

_____ Enjoy actively participating in groups

_____ Create bonds with diverse groups of people

Interpersonal intelligence is the ability to use effective communication, social, leadership, and cooperative teamwork skills.

_____Feel a sense of global responsibility toward others

_____Are able to interpret nonverbal clues (facial expressions, gestures, or general body language)

_____Are able to interpret the behavior, motivation, and intentions of others

_____Enjoy and skilled at socializing

_____Enjoy helping others, sharing their skills, tutoring or teaching others

_____Contribute to the development of positive group dynamics

Following are common career options for people with strong interpersonal intelligence:

parent, tutor, teacher, therapist, counselor, healer, social activist, motivational speaker, workshop leader, mentor, religious leader, sociologist, actor, political organizer, salesperson

Intrapersonal Intelligence

Intrapersonal intelligence is the ability to use skills related to personal growth, self-understanding, and self-motivation and to use intuition and spirituality. Individuals with strong intrapersonal intelligence use a variety of skills to achieve personal goals and potential. Following are other subintelligences (core abilities) for intrapersonal intelligence. **Check the core abilities you believe are well developed in you.**

_____Use self-reflection and self-motivation

_____Enjoy exploring feelings, values, goals, strengths, weaknesses, and personal history

_____Show ability to interpret life experiences as lessons and as guides to change aspects of their lives or to give their lives meaning

_____Show an ability to project a sense of pride, self-esteem, confidence, self-responsibility, control, and empowerment

_____Demonstrate self-regulating, self-motivating, and goal-oriented behaviors

_____Adapt well to a wide variety of situations and circumstances

Following are common career options for people with strong intrapersonal intelligence:

psychiatrist, spiritual or personal counselor, self-help writer, motivational speaker, guidance counselor, life coach, philosopher, blogger, biographer

Naturalist Intelligence

Naturalist intelligence is the ability to show a sensitivity to cycles and patterns in the physical world. Following are other subintelligences (core abilities) for naturalist intelligence. **Check the core abilities you believe are well developed in you.**

Intrapersonal intelligence is the ability to use skills related to personal growth, self-understanding, and self-motivation and to use intuition and spirituality.

CONCEPT CHECK   1.6
What are the main differences between interpersonal intelligence and intrapersonal intelligence?

Naturalist intelligence is the ability to show a sensitivity to cycles and patterns in the physical world.

_____ Observe keenly nature's elements—such as daily, seasonal, and cyclical changes

_____ Feel sensitivity to and understand the relationships in nature, which include the balance of plants, animals, and the environment

_____ Demonstrate detailed knowledge and expertise in recognizing and classifying plants and animals

_____ Show ability to organize, classify, arrange, or group items and ideas into logical units or categories

_____ Show ability to apply strong pattern-recognition talents to areas outside of the plant–animal world, such as with artists, poets, laboratory scientists, and social scientists

> **CONCEPT CHECK   1.7**
> *Which intelligences do you believe require more "mental activity" than "physical activity"?*

Following are common career options for people with strong naturalist intelligence:

meteorologist, geologist, botanist, herbologist, horticulturist, biologist, naturopath, holistic healer, medicine man, gardener, landscaper, farmer, environmentalist

EXERCISE 1.4

Recognizing Intelligences

DIRECTIONS: Work with a partner or in a small group to analyze specific tasks and the intelligences activated and used in each task. Discuss which of the eight intelligences is actively being used in each activity: linguistic (words), logical-mathematical (numbers), musical (music), bodily-kinesthetic (body), spatial (picture), interpersonal (people), intrapersonal (self), or naturalist (nature). You may identify more than one intelligence per activity. You may be asked to share your answers with the class.

1. Work as a group to create a student handbook for incoming freshmen.

   _____

2. Perform a scene from a book in a literature class.

   _____

3. Interview four people who work in a career field of interest to you, and then compile the results of the four interviews you conducted.

   _____

4. Collect and organize samples of music from five cultural or ethnic groups.

   _____

5. Use a computer graphics program to create an eye-catching presentation about your heritage or cultural ties.

   _____

6. Construct a 3-D model that shows your idea for making better use of an existing space on campus.

   _____

7. Keep a daily journal or log to record your progress in reaching a specific goal.

   _____

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CHECK POINT 1.2

True or False? See Test-Taking Strategies 1–9 in Appendix A.

_____ 1. The Theory of Multiple Intelligences proposes that there are eight kinds of intelligences, each with core abilities called subintelligences.

_____ 2. To be considered intellectually strong in a specific intelligence, a person must exhibit well-developed abilities in all of the core abilities for that intelligence.

_____ 3. Standardized testing can give individuals specific IQ and MI scores that compare them to people within the same age range.

_____ 4. A person with a well-developed interpersonal intelligence may demonstrate leadership skills and work well with others.

_____ 5. In the MI Theory, an intelligence does not refer to the potential to solve problems or create products that have value in a culture.

Fill-in-the-Blanks See Test-Taking Strategies 21–24 in Appendix A.

1. In MI theory, subintelligences are also referred to as _____ _____.

2. In Gardner's MI theory, the _____ intelligence includes the ability to look for patterns within and outside of nature; the _____-_____ intelligence includes the ability to look for and use numerical patterns.

3. Authors, journalists, poets, playwrights, and lawyers often demonstrate strength and abilities in _____intelligence.

Access Chapter 1 Practice Quiz 2 in your College Success CourseMate, accessed through *CengageBrain.com.*

CHAPTER 1
REFLECTIVE WRITING 1

On separate paper, in a journal, or online in this textbook's College Success CourseMate, complete the following directions.

1. What academic major or career path interests you? How does your choice of careers reflect or not reflect your abilities or perceived intelligences as defined by Gardner?

2. What did you learn about your preferred cognitive learning style that will help you perform well in

your courses? How will understanding your learning style preference impact the learning strategy choices you intend to use this term in school?

Access Chapter 1 Reflective Writing 1 in your College Success CourseMate, accessed through *CengageBrain.com.*

Personality Types

3 *Identify the eight personality preferences defined by Myers and Briggs and discuss the use of opposite preferences in their theory.*

The personality assessment instrument and personality preferences in this section do not evaluate your modalities, skill levels, or abilities. Instead, the Myers-Briggs Type Indicator® (MBTI®) instrument is a personality assessment

tool developed in the 1940s by Isabel Briggs Myers and Katharine Cook Briggs. The *Myers-Briggs Type Indicator® assessment* is an inventory test that identifies sixteen personality types. Following are important points about the personality types identified by the Myers-Briggs assessment:

- *Personality types* are sixteen combinations comprising four personality preferences. The four letters in each personality type represent four specific preferences. (See Figure 1.5 next page.)
- A *personality preference* refers to a way of doing or responding that feels more natural, automatic, or comfortable and that produces better results.
- Being aware of your personality preferences and personality type helps you understand many facets of yourself, including your behavior, your decision-making processes, your motivation, and your values.
- One value of knowing your type is being able to choose to do things that come more naturally most of the time, which will take less energy and will be easier for you to do. This also includes selecting effective study skills that feel more natural and require less effort to use.
- As you better understand your personality preferences and type, you will gain insights about other people, understand and appreciate them more, and become aware of different ways to interact more effectively.
- All personality types are of value and importance. One personality preference or personality type is not superior or more desirable than another.
- Even though you may prefer to approach situations or processes using your personality preferences, you will encounter situations in which you may need to use strategies that are opposite of your preferred methods. You may feel somewhat uncomfortable or awkward in such situations, but that does not mean that you will be incapable of performing or functioning effectively.

Eight Personality Preferences of MBTI Personality Types

As previously stated, a personality preference refers to a way of doing or responding that feels more natural, automatic, or comfortable, and that produces better results. To demonstrate how preferences work, place a pen in your hand and write your first name. Now, place the pen in your other hand and write your first name. You were able to write your name with both hands, but which hand produced the better results and felt more natural to use? The hand you used with greater ease is your preferred hand for writing. Following are important points about personality preferences:

- When you are using your personality preference, what you are doing requires less effort or struggle.
- When you are not using your personality preference but instead are using the opposite pole, you may feel more stress, frustration, discomfort, or dissatisfaction with the results.
- In some situations, you may choose to use the opposite of your personality preference; you may not feel as comfortable or confident, but you will be able to respond or perform.

Myers-Briggs Type Indicator® assessment is an inventory test that identifies sixteen personality types.

Personality types are sixteen combinations comprising four personality preferences.

Personality preference refers to a way of doing or responding that feels more natural, automatic, or comfortable and that produces better results.

CONCEPT CHECK **1.8**
How do personality preferences differ from learning style preferences? What do they have in common?

Figure 1.5	**Pairs of Opposite Preferences**

EXTRAVERSION (E)   ↔   INTROVERSION (I)

SENSING (S)   ↔   INTUITION (N)

THINKING (T)   ↔   FEELING (F)

JUDGING (J)   ↔   PERCEIVING (P)

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- We all use the eight personality preferences, but four of the preferences will work more comfortably and more effectively as our personal preferences.

Figure 1.5 shows the eight personality preferences that are the building blocks of personality types. Notice the letters used to represent the eight preferences: E, I, S, N, T, F, J, and P. The preferences appear as sets of opposites, referred to as *poles* of each personality building block. One personality preference in each pair of opposites is your personality preference. You can use only one of the two preferences at any given time. In other words, you cannot use Extraversion and use Introversion at the same time.

Four Core Building Blocks of MBTI Personality Types

The four core building blocks identified by the MBTI instrument are the foundation pillars to understanding personality types. These building blocks are also referred to as *scales*. Each core building block (or scale) has a pair of opposite personality preferences that represent where you focus your attention, how you take in information, how you make decisions, and how you structure your life. (For a visual mapping of this information, go to **Figure 10.13** on page 326.) Notice which personality preferences belong to each of the core building blocks.

1. Core Building Block: **Where do you focus your attention?**

    Do you prefer Extraversion (**E**) or *Introversion* (**I**)?

2. Core Building Block: **How do you take in information?**

    Do you prefer Sensing (**S**) or *Intuition* (**N**)?

3. Core Building Block: **How do you make decisions?**

    Do you prefer Thinking (**T**) or *Feeling* (**F**)?

4. Core Building Block: **How do you approach or structure your life?**

    Do you prefer Judging (**J**) or *Perceiving* (**P**)?

Sixteen Personality Types

The only way to verify your MBTI type is to take the MBTI assessment test, which may be administered on your college campus or place of employment. However, without taking the formal MBTI assessment test, in the next section you may estimate your personality type by selecting characteristics or traits of each personality preference that seem to describe you the best and reflect ways to do things that are easier, more comfortable, or feel more natural for you.

FIGURE 1.6   **Sixteen Personality Types**

ISTJ	ISFJ	INFJ	INTJ
ISTP	ISFP	INFP	INTP
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ

Selecting your preferences from the pairs of opposites for each of the core building blocks results in four letters that represent your personality type. **Figure 1.6** shows the sixteen possible combinations of personality types. Communication styles, social and learning behaviors, values, focus of attention, decision-making processes, self-regulatory skills (managing time, change, and conflict), relationship dynamics, and other characteristics vary for each personality type. These sixteen personality types are all of equal value or importance; one type is not better or more desirable than the others.

CONCEPT CHECK   1.9

What are the sixteen personality types? Translate the four letters in Figure 1.6 to the words they represent to name each personality type. For example, the first personality would be Introversion-Sensing-Thinking-Judging.

Extraversion and Introversion

Where do you focus your attention? Do you get energized by the outside world of people and activities or the inner world of ideas, thoughts, and reflections? Does your focus turn outward to people and the world or inward with self-reflection? Answers to these questions may be indicators of your natural personality preference of *Extraversion* (E) or *Introversion* (I).

The ***Extraversion personality preference (E)*** tends to focus attention on the outer world of people and things. The ***Introversion personality preference (I)*** tends to focus attention on the inner world of ideas, thoughts, and reflection. Keep in mind that we do both *E* and *I,* but one will be easier—the one we instinctively do more often and with the more comfort. **Exercise 1.5** provides you with the opportunity to estimate your personality preference for Extraversion or Introversion.

Extraversion personality preference (E) tends to focus attention on the outer world of people and things.

Introversion personality preference (I) tends to focus attention on the inner world of ideas, thoughts, and reflection.

EXERCISE 1.5

Where You Focus Your Attention

DIRECTIONS: Check the descriptions or characteristics that seem to be most closely related to you, are easier for you to do, or reflect how you perceive yourself to be. For each pair of opposite characteristics, check only one of the items in the pair—either in the left column or the right column. After completing the list, which column has the most checks? Circle the word **Extraversion** or **Introversion** at the top of the list to indicate which personality preference best describes you.

WHERE YOU FOCUS YOUR ATTENTION

Extraversion

_____ **1.** Focus attention and get energized by people and experiences in the world

Introversion

_____ **1.** Focus attention and get energized by inner world of thoughts and ideas

(continued)

Exercise 1.5 (continued)

Extraversion	**Introversion**
_____ **2.** Tend to think out loud and share ideas comfortably and freely with others	_____ **2.** Tend to think things through privately before telling a few selected others
_____ **3.** Prefer to communicate and work ideas out with others by talking	_____ **3.** Prefer to communicate in writing
_____ **4.** Learn best by moving around, talking, and discussing	_____ **4.** Learn best by reflection, mental rehearsal, reading, and listening
_____ **5.** May get bored if it's too quiet	_____ **5.** May feel drained if setting is too noisy
_____ **6.** Sociable, expressive, outgoing	_____ **6.** Private, reserved, reflective
_____ **7.** Active, enthusiastic	_____ **7.** Quiet, calmer nature, contemplative
_____ **8.** Fairly easy to get to know	_____ **8.** Known personally only by a few close friends

Sources: Adapted from I. B. Myers, *Introduction to Type*, 6th ed. (Mountain View, CA: CPP, 1998); MBTI® Complete assessment

Students with Extraversion and Introversion Preferences

Now that you are aware of the opposite characteristics of people with an Extraversion personality preference and people with an Introversion personality preference, you are better equipped to understand classroom dynamics that occur when students with opposite personality preferences interact. As you read the following descriptions of students with Extraversion personality preferences and students with Introversion personality preferences, you will likely recognize the personality preference for yourself and other students in your classes.

Students in the Classroom	
Students with **Extraversion preference** tend to	Students with **Introversion preference** tend to
• liven up the class with enthusiasm and energy.	• be quiet and reserved.
• talk freely and are eager to share information.	• refrain from volunteering information or comments.
• welcome discussions and class questions.	• prefer to have questions provided in advance to allow time to formulate responses.
• enjoy group activities.	• not enjoy participating in group activities.
• possibly dominate conversations or overwhelm students with Introversion preference.	• appreciate when questions or conversations slow down or even pause so they do not feel too overwhelmed.
• respond quickly to questions.	• appreciate time to contemplate and then respond to question cautiously.
• get restless or impatient if the classroom pace is slow or they are not engaged.	• feel uncomfortable if classroom pace is too fast for them to feel confident participating.

CONCEPT CHECK 1.10

How would people with Introversion and Extraversion personality preferences react differently to: a group project, an ongoing journal writing assignment, a study group, and working with a tutor?

Friends with Extraversion and Introversion Preferences

Friendships may feel more comfortable and less stressful with individuals who have the same or similar personality preferences. However, understanding the

differences between personality preferences may help you better understand your friends; create stronger, more sincere friendships; and encourage compromises and adjustments to accommodate each other's interests and preferences. For example, friends with the Extraversion personality preference may prefer to plan a party or go out to a place with a lot of people or activities because they tend to meet people readily and engage in immediate conversations. They may dominate conversations, talk endlessly about whatever comes to mind, or speak too quickly without sufficient thought. These friends may be easier to get to know because they openly share information, thoughts, experiences, and opinions.

Friends who have the Introversion personality preference may prefer a quiet dinner together, a movie at home, or a small gathering as they do not tend to reach out immediately to meet new people or begin the process of forming new friendships. They tend to listen and comment only after having contemplated an appropriate answer. These friends may be more difficult to get to know, but they often are genuine and become good friends when, over time, they let another person into their more private world. They are not likely to share a friend's stories or information with others; they value and can be trusted with confidence. On the other hand, friends with the Extraversion personality preference may need to heighten their awareness of the need to maintain confidentiality and trust by refraining from sharing private aspects of a friend's life.

Sensing and Intuition

How do you take in information about yourself and about the world? What kind of information do you trust and find easier to work with or value more? Answers to these questions may be indicators of your natural personality preference of *Sensing* (S) or *Intuition* (N).

The *Sensing personality preference (S)* tends to take in information through the five senses: sight, sound, touch, taste, and smell. The *Intuition personality preference (N)* tends to take in information by noting patterns, relationships, and sometimes hunches or possibilities beyond the five senses. **Exercise 1.6** provides you with the opportunity to estimate your personality preference for Sensing or Intuition.

> **Sensing personality preference (S)** tends to take in information through the five senses: sight, sound, touch, taste, and smell.

> **Intuition personality preference (N)** tends to take in information by noting patterns, relationships, and sometimes hunches or possibilities beyond the five senses.

EXERCISE 1.6

How You Take In Information

DIRECTIONS: Check the descriptions or characteristics that seem to be most closely related to you, are easier for you to do, or reflect how you perceive yourself to be. For each pair of opposite characteristics, check only one of the items in the pair—either in the left column or the right column. Not all of your checks need to appear in only one column. After completing the list, which column has the most checks? Circle the word **Sensing** or **Intuition** at the top of the list to indicate which preference best describes you.

HOW YOU TAKE IN INFORMATION

Sensing	Intuition
_____ **1.** Focus and rely on information that comes through the senses	_____ **1.** Focus on meanings, relationships, patterns, and big pictures
_____ **2.** Oriented to present realities, realistic, literal	_____ **2.** Oriented to future possibilities, imaginative, figurative, symbolic

(continued)

Exercise 1.6 (continued)

Sensing	**Intuition**

_____ **3.** Trust factual, concrete information and accurate details

_____ **3.** Trust hunches, creativity, inspiration, and thinking outside the box

_____ **4.** Interested in accuracy of details

_____ **4.** Interested in big-picture ideas, concepts, or patterns

_____ **5.** Move carefully and thoroughly to reach conclusions

_____ **5.** Move quickly to conclusions and follow hunches or intuition

_____ **6.** Start at the beginning and work step by step

_____ **6.** Begin anywhere in a task and skip over steps

_____ **7.** Tend to follow instructions

_____ **7.** Tend to create own instructions and be inventive

_____ **8.** Enjoy, value, and trust experiences, traditions, and tried-and-true ways

_____ **8.** Enjoy, value, and respect new experiences, and original, innovative ways

Sources: Adapted from I. B. Myers, *Introduction to Type*, 6th ed. (Mountain View, CA: CPP, 1998); MBTI® Complete assessment

Do you have a Sensing or an Intuition personality preference? How does your way of taking in information differ from the personality preference opposite of yours?

Students with Sensing and Intuition Preferences

Personality preferences in many ways are also learning style preferences as they reflect ways students can learn best by selecting strategies that may be easier and more comfortable or natural to use. The Sensing and the Intuition preferences are the opposites or poles for the building block "How You Take In Information."

As you read the following descriptions of students with the Sensing personality preference and students with the Intuition personality preference, ponder how these different personality preferences impact classroom instruction and activities designed to help students take in new course information.

Students in the Classroom	
Students with **Sensing preference** tend to	Students with **Intuition preference** tend to
• favor step-by-step instruction.	• favor approaches with opportunities to explore new, innovative ways to receive and express information.
• like direct, to-the-point presentations of information.	• enjoy brainstorming.
• prefer receiving concrete facts and theories with practical applications and conclusions.	• enjoy experimenting with alternative ways to develop creative solutions or reach conclusions.
• see specific details before seeing the total picture.	• see the "big picture" before focusing on details.
• find comfort in established, proven methods and traditional approaches.	• not always be able to explain how conclusions were reached.

Friends with Sensing and Intuition Preferences

Because Sensing and Intuition personality preferences are opposites, some differences in behaviors will occur. For example, differences may appear in *traditional* verses *novel* or *new* choices of activities, opinions, or ways to take in information. Friends with the Sensing personality preference may feel most comfortable taking in new information by engaging in activities or topics that involve personal