Center for the Enhancement of Learning and Teaching

TEACHING TRANSFERABLE SKILLS

Instructor Resource Guide

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THE VALUE OF ESSENTIAL SKILLS

Higher education is evolving to prepare students for an unpredictable and rapidly changing world. While content knowledge remains important, research consistently shows that students also need transferable skills — such as communication, critical thinking, and teamwork — to navigate professional and civic life successfully (National Association of Colleges and Employers, 2021). The ten essential skills outlined in this resource guide equip students with the competencies they need to approach complex problems, collaborate effectively, and adapt to new challenges.

Employers emphasize these skills as crucial for career readiness. Surveys from the AAC&U and NACE highlight that strong communication, problem-solving, and teamwork abilities are among the most sought-after competencies in the workforce (AAC&U, 2022). Yet, many students and instructors alike struggle with how to explicitly teach and assess these skills in coursework. This guide provides practical strategies for integrating skill development into course design, ensuring students not only learn content but also gain the ability to apply it effectively.

Designing Courses with Skills in Mind

A crucial step in integrating essential skills into coursework is aligning them with course learning objectives. Well-written learning objectives help students see the relevance of skill development and provide clear expectations for how they will engage with and demonstrate these skills.

Prompts to Encourage Skill-Based Learning Design

- How can students practice applying this concept in a novel situation?
- In what ways can students demonstrate their understanding beyond traditional exams or papers?
- How can students reflect on their skill development and articulate their growth?

Guidelines for Writing Learning Objectives that Incorporate Skills

- Use Bloom's Taxonomy to frame objectives in terms of cognitive processes (e.g., analyze, evaluate, create).
- Be explicit about the skill being developed alongside the content.
- Use active verbs that align with measurable outcomes.
- Connect the skill to real-world applications or discipline-specific challenges.

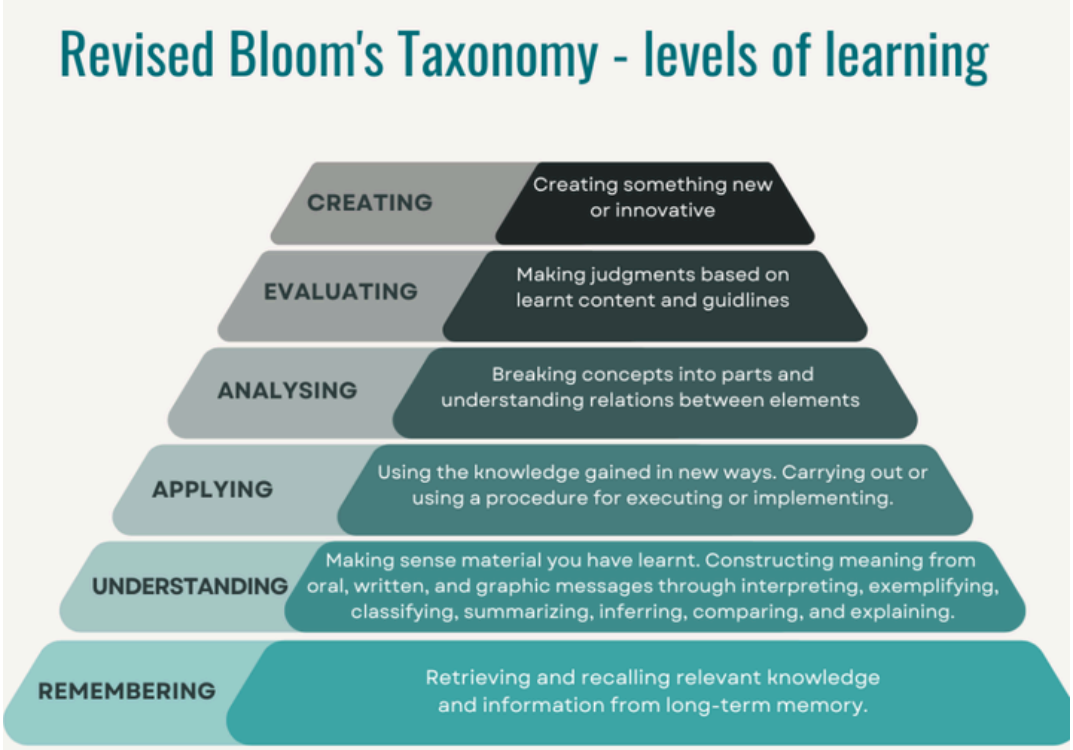
Instead of: *Students will understand research methods in sociology.*

Try: *Students will evaluate and communicate research findings through clear, structured written reports and oral presentations.*

Instead of: *Students will learn about ethical dilemmas in business.*

Try: *Students will analyze ethical dilemmas and articulate well-reasoned responses using professional and persuasive communication strategies.*

By intentionally crafting learning objectives that integrate essential skills, instructors can create a more meaningful and applied learning experience for students.



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USING AI TO SUPPORT SKILL DEVELOPMENT

Why AI Matters in Skill Development

Artificial intelligence (AI) is rapidly transforming the way we learn, work, and communicate. While AI tools offer powerful ways to enhance problem-solving, streamline workflows, and support decision-making, they are most effective when used strategically and reflectively. Developing AI literacy is an essential component of career readiness, allowing students to use AI ethically, critically evaluate its outputs, and integrate AI-generated insights with human expertise (Mollick & Mollick, 2023).

Rather than viewing AI as a shortcut or replacement for essential skills, students should be encouraged to engage with AI as a cognitive partner, helping them build, refine, and reflect on their competencies. This section outlines how AI can support learning and skill development while reinforcing the importance of human judgment, creativity, and ethical reasoning in its use.

Approaches to AI Use as a Skill

Students and educators can leverage AI in three primary ways to support the development of essential skills:

Thought Partner

AI can help generate ideas, provide alternative perspectives, and refine arguments by offering structured prompts and insights

Research & Analysis Tool

AI can assist in finding patterns, summarizing complex information, and identifying trends across large datasets.

Skill Reflection & Improvement

AI can offer feedback on writing, communication, and critical thinking, helping students reflect on their work and refine their skills.

Essential Skill 10

USE INFORMATION
FOR DECISION MAKING

Graduates will identify, evaluate, and responsibly use information needed for decision making.

Essential Skill 10
USE INFORMATION

Why It Matters

Information literacy is more than the ability to find sources. Students use information when they decide what question is worth asking, where to search, which sources merit trust, how evidence fits together, and what conclusions can responsibly be drawn. In academic, professional, and civic contexts, students are regularly asked to make judgments under conditions of uncertainty. Developing this skill helps them move from vague topics or quick answers toward more focused questions, credible evidence, and well-supported decisions.

Students often experience uncertainty early in the research process, and that uncertainty is not a sign of failure. Kuhlthau's information search process describes uncertainty, confusion, and focus formation as natural parts of how people make meaning from information. When instructors make this process visible, students can learn to treat research as iterative: questions evolve, searches improve, evidence accumulates, and conclusions become more precise over time (Kuhlthau, 1991).

Teaching information literacy explicitly is especially important because students may feel confident using everyday search tools while still needing support with disciplined information practices. Research on question formulation shows that undergraduates often struggle to connect research questions with information seeking, and many begin with broad topics or early conclusions rather than open inquiry (Scharf & Dera, 2021). Similarly, research on digital source evaluation shows that students often rely on surface-level cues, such as domain names, website appearance, or "About" pages, unless they are taught more robust strategies such as lateral reading (Breakstone et al., 2021; McGrew et al., 2019).

Across disciplines, information literacy supports better decision-making because students learn to gather relevant information, evaluate credibility and bias, synthesize patterns across sources, and attribute information ethically. These practices matter in research papers and presentations, but they also transfer to clinical judgments, policy recommendations, design choices, business decisions, community problem-solving, media consumption, and workplace communication.

Integrating This Skill into Your Course

To help students use information effectively for decision-making, consider the following strategies:

- Ask students to identify what they need to know before making a decision, recommendation, interpretation, diagnosis, design choice, or action.
- Build in practice moving from broad topics to focused, answerable, discipline-informed questions (Scharf & Dera, 2021).
- Model search as a revisable process by having students test keywords, use field-specific resources, and revise searches when results are too broad, too narrow, or not relevant (Hirt et al., 2020).
- Have students justify source credibility with evidence, including who is behind the information, what evidence is provided, what other sources say, and how the source's purpose or point of view affects its usefulness (Breakstone et al., 2021; McGrew et al., 2019).
- Require students to compare sources, identify patterns or contradictions, and exclude irrelevant information before drawing conclusions (Dahlen & Leuzinger, 2020).
- Teach citation, paraphrasing, and attribution as part of responsibly representing information, not just as formatting requirements or plagiarism prevention (Howard et al., 2010; Zwick et al., 2019).

By embedding these practices into coursework, instructors help students develop a transferable process for making informed, ethical, evidence-based decisions.

Addressing Student Buy-In

Many students assume they already know how to find and evaluate information because they search online every day. To encourage deeper engagement:

- Use real-world scenarios where students must make a recommendation, choose between options, respond to a case, or advise a stakeholder using evidence.
- Normalize uncertainty as part of the research process. Students may need to revise their questions, search terms, or conclusions as they encounter new information (Kuhlthau, 1991).
- Show students that confidence does not always equal skill. Use short diagnostic activities, search logs, credibility comparisons, or paraphrasing exercises to make their process visible (Hirt et al., 2020).
- Connect information use to disciplinary expectations. Ask students what counts as strong evidence, credible authority, relevant information, and appropriate attribution in the field.

- Emphasize that source evaluation requires more than checking the URL, design, or "About" page. Students benefit from explicit practice verifying who is behind information and what other credible sources say (Breakstone et al., 2021; McGrew et al., 2019).
- Assess pieces of the process, not only the final product. Question drafts, search revisions, credibility rationales, synthesis matrices, and source-use reflections can help students see information literacy as a skill they are building over time (Erlinger, 2018).

By connecting information literacy to real decisions, disciplinary expectations, and visible skill development, instructors can help students see why this skill matters beyond a single assignment.

Ways to Identify Information Literacy Development in Your Courses

Instructors may already be teaching information literacy without explicitly labeling it. Look for moments where students are asked to:

- Identify information needs. Do students recognize what they need to know before making a decision?
- Develop questions. Do students move from broad topics to focused, answerable, discipline-relevant questions?
- Search strategically. Do students choose appropriate tools, keywords, databases, or information environments rather than relying on the first available result?
- Evaluate sources. Do students analyze bias, expertise, point of view, relevance, and currency in relation to the specific decision they are making?
- Synthesize evidence. Do students identify connections, patterns, contradictions, and gaps across sources before drawing conclusions?
- Use information responsibly. Do students paraphrase, summarize, quote, cite, and attribute sources according to disciplinary expectations?

Making these moments explicit helps students recognize information literacy as a skill they are developing across the course, not just a requirement attached to a research paper.

Example Scaffolded Skill Assignment Progression

A structured approach ensures that students practice the full information-use process over time: identifying what they need to know, searching strategically, evaluating credibility, synthesizing evidence, and communicating decisions responsibly.

Stage	Activity Example
Early Semester	Students identify a decision or problem, generate possible questions, refine one question, translate it into search terms, and evaluate one source using external verification.
Mid-Semester	Students revise their search strategy, compare multiple source types, analyze strengths and limitations, and complete a synthesis matrix identifying patterns, contradictions, and gaps.
End of Semester	Students make and communicate an evidence-based decision, recommendation, interpretation, or argument. They explain how sources informed the decision, exclude irrelevant information, and attribute all information ethically using field-appropriate conventions.

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Essential Skill 10: Use information for decision making

Graduates will identify, evaluate, and responsibly use information needed for decision making.

Benchmark College Entry	Milestone End of Two Years of College	Capstone Bachelor's Program Completion
Identifies topics requiring information to make a decision.	Develops questions with the appropriate scope for the field.	Articulates questions informed by key concepts, relevant terminology, and related questions in the field.
Develops basic search strategies on given topics with familiar resources.	Implements search strategies to find information using credible resources relevant to the field.	Executes well-developed search strategies that consider all available resources and revises the strategy as necessary.
Identifies strengths and weaknesses of information sources.	Analyzes strengths and weaknesses of information sources to identify elements of bias, expertise, and point of view.	Critiques information sources to thoroughly evaluate bias, expertise, point of view, and relevance and currency to the field.
Describes the primary ideas in a variety of sources when making a decision.	Identifies connections between relevant sources to make a decision.	Synthesizes patterns across sources, excluding irrelevant information to draw conclusions and reach and communicate informed decisions.
Identifies the source of information used for decision making.	Provides appropriate recognition of sources used for decision making.	Attributes ethically accessed information consistently using conventions appropriate to the field.

Instructional Materials

Explore adaptable example activities, assignments, and assessments

Activity

From Decision to Search

Objective

To help students identify an information need, develop a basic search question, locate one relevant source, and describe the source's usefulness and limitations for making a decision.

Context

At the Benchmark level, students may assume that using information simply means finding a source that "answers" a question. However, information literacy begins earlier: students first need to recognize what they need to know before making a decision. Research on question formulation emphasizes that many undergraduates struggle to move from broad topics to focused, researchable questions, and that question development should be taught explicitly as part of information literacy (Scharf & Dera, 2021). Kuhlthau's work on the information search process also reminds us that uncertainty and confusion are normal early stages of information seeking, not signs that students are doing something wrong (Kuhlthau, 1991).

Instructions

1. Introduce a simple decision scenario

Give students a low-stakes decision scenario related to your course or discipline. For example:

- A public health class: Should a campus health campaign focus on sleep, nutrition, or stress?
- A business class: Should a small company invest in social media ads or local event sponsorship?
- A biology class: Which environmental factor should a community monitor first in a local water-quality project?
- A writing class: Which audience would be most effective for a public-facing argument on this issue?
- An engineering class: Which material should a team consider for a low-cost prototype?

Students can also identify a decision from an upcoming assignment, project, case, or lab.

Activity

From Decision to Search

2. Identify what information is needed

Students complete a brief planning table:

Decision to make	What do I already know?	What do I need to know before deciding?

Encourage students to list at least three things they would need to know before making a responsible decision.

3. Turn the information need into a question

Students choose one information need and turn it into a basic research question.

Example:

- Broad topic: campus stress
- Information need: what stressors affect first-year students most
- Question: What are common sources of stress for first-year college students?
-

Then students identify 3–5 possible search terms, including at least one synonym or related term.

4. Conduct a basic search

Students use a familiar resource, such as a library database, Google Scholar, a course-approved website, or another instructor-selected source environment. They locate one source that seems relevant to their question.

Students record:

- search tool used
- search terms used

Activity
From Decision to Search

- source title
- author or organization
- publication date
- link, citation, or enough information to find the source again

5. Describe the source and its usefulness

Students read or skim the source and answer:

- What is the main idea of this source?
- What information from this source could help with the decision?
- What is one strength of this source?
- What is one limitation, weakness, or unanswered question?
- What would I still need to know before making a decision?

6. Brief debrief

In pairs or small groups, students share:

- One search term that worked well
- One thing their source helped them understand
- One thing their source did not answer
-

Close by emphasizing that the first search is rarely the final search. The goal is to begin identifying what information is needed and how sources can help, not to find a perfect answer immediately.

TIPS

- **Keep the decision scenario simple.** At this level, the goal is not advanced research but noticing what information is needed before deciding.
- **Normalize imperfect first searches.** Students may find sources that are only partly useful, and that is productive for learning.
- **Encourage students to name limitations honestly.** A source can be useful and still incomplete, outdated, biased, too general, or not fully relevant.
- **Use this as a diagnostic.** Student responses will show whether they need more support with question development, search terms, source types, or distinguishing main ideas from details.
- **Connect the activity to later assignments.** Students can return to this planning table when they revise their question, expand their search, or synthesize multiple sources.

Activity

Example Assessment

Decision-to-Search Worksheet and Source Reflection

Students submit a completed worksheet that includes:

- A decision or problem related to the course
- What they already know and what they still need to know
- One focused research question
- 3–5 search terms or related terms
- A record of one search they conducted
- One source they found, with enough information to locate it again
- A brief reflection describing the source's main idea, usefulness, strength, limitation, and what they would still need to know before making a decision

This assessment should be low stakes and focused on process. The goal is to see whether students can begin identifying information needs, developing basic searches, describing source ideas, and recognizing source strengths and limitations.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Information Need & Question Development	Clearly identifies what information is needed before making the decision and develops a focused, answerable question	Identifies relevant information needs and develops a mostly clear question	Information need or question is present but vague, broad, or only loosely connected to the decision	Does not identify a meaningful information need or research question
Basic Search Strategy	Selects useful search terms, including synonyms or related terms, and uses an appropriate search tool	Uses relevant search terms and an appropriate search tool	Search terms are limited, overly broad, or only partly connected to the question	No meaningful search strategy documented
Source Description & Identification	Records complete source information and accurately describes the source's main idea and relevance	Records enough source information and describes the source's main idea with some connection to the decision	Source information or description is incomplete, vague, or difficult to verify	Does not identify or meaningfully describe the source used
Strengths, Limitations & Next Steps	Identifies a specific strength and limitation of the source and explains what information is still needed	Identifies at least one strength, one limitation, and a reasonable next step	Mentions a strength, limitation, or next step, but explanation is surface-level	Does not identify source strengths, limitations, or next steps

AI-Supported Activity

Question and Search Strategy Practice

Objective

To help students practice identifying information needs, developing basic research questions, generating search terms, and reflecting on how AI-supported brainstorming shaped their initial search strategy.

Context

At the Benchmark level, students are learning to identify when information is needed, develop basic search strategies, describe source ideas, and recognize where information came from. AI can support this early stage by helping students practice turning a decision into possible questions and search terms before they begin searching in actual databases or course-approved resources.

This activity positions AI as a practice partner, not a source of final information. Students use AI to brainstorm, test, and revise their thinking, but they must still conduct their own search and evaluate real sources. This aligns with research on question formulation, which emphasizes that students need explicit practice moving from broad topics to focused research questions (Scharf & Dera, 2021). It also supports students through the uncertainty that often appears early in the information search process (Kuhlthau, 1991).

Instructions

1. Select a decision scenario

Students begin with the same decision scenario from the standard activity, or choose a decision connected to an upcoming assignment.

Example: “You are helping design a campus health campaign. Should the campaign focus on sleep, nutrition, or stress?”

2. Use AI to brainstorm information needs

Students paste the decision scenario into a chatbot and ask it to help identify what information someone would need before making a responsible decision. Students should review the AI’s suggestions and choose the **three most relevant information needs**. They should also identify anything the AI suggested that seems too broad, irrelevant, or unsupported.

AI-Supported Activity

Question and Search Strategy Practice

3. Use AI to develop possible questions

Students ask AI to turn one selected information need into several possible research questions. Then they choose one question and revise it in their own words.

Students should check:

- Is the question focused enough?
- Is it answerable with available information?
- Does it use language that fits the course or discipline?
- Would answering it help someone make the decision?

4. Use AI to generate search terms

Students ask AI to suggest possible keywords, synonyms, and related terms for their question. They then create their own basic search string using selected terms.

Example:
Question: What are common sources of stress for first-year college students?
Possible search terms: first-year students, college freshmen, stress, stressors, mental health, academic pressure

5. Conduct a real search

Students use a library database, Google Scholar, course-approved website, or instructor-selected resource. They should not rely on AI-generated citations or source claims.

Students record:

- Search tool used
- Search terms used
- One source they found
- Full citation or source-identifying information
- One sentence explaining why the source may be useful

AI-Supported Activity

Question and Search Strategy Practice

6. Reflect on the AI-supported process

Students submit a short reflection:

- What did AI help you clarify?
- What did you revise or reject from the AI's suggestions?
- How did your question or search terms change?
- What did your real search reveal that AI could not confirm?
- What would you search next?

Prompt Template (for Student Use)

"I am practicing how to use information for decision-making. My decision scenario is: [paste scenario]. Help me identify what information someone would need before making this decision. Then suggest 3–5 possible research questions and possible search terms for each one. Do not invent sources or citations. Focus only on helping me brainstorm questions and search terms."

Follow-up Questions to Ask

Students can use these follow-up questions to push the AI's suggestions further:

- Which of these questions is most focused and answerable?
- Which question is too broad for a short assignment?
- What keywords or synonyms might I use in a database search?
- What words might experts in this field use instead?
- What information would I still need before making a decision?
- What assumptions am I making in this question?

TIPS

- Remind students that AI can suggest search language, but it cannot replace searching credible sources.
- Ask students to mark which AI suggestions they used, revised, or rejected.
- Encourage students to compare the AI's suggested terms with the language used in actual search results.
- Keep the activity low stakes. The goal is to practice forming a better starting point, not to produce a final research question.
- Consider pairing this with a librarian-led or instructor-led demonstration of how the same question works differently in Google, Google Scholar, and a discipline-specific database.

Activity

Example Assessment

AI Brainstorm, Search Record, and Reflection

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Information Need Identification	Clearly identifies multiple relevant information needs connected to the decision	Identifies relevant information needs with some connection to the decision	Identifies general information needs, but connection to decision is limited	Does not identify meaningful information needs
Question Development	Revises AI suggestions into a focused, answerable question	Produces a mostly focused question with minor issues in scope or clarity	Question is present but broad, vague, or only loosely connected to the decision	No clear research question
Search Term Development	Selects and revises keywords thoughtfully, including synonyms or related terms	Identifies usable keywords with some revision	Uses limited or overly broad search terms	Does not identify usable search terms
Real Search Completion	Conducts a real search and records source information clearly	Conducts a real search and records most required information	Search record is incomplete or source is weakly connected	No evidence of a real search
Reflection on AI Use	Thoughtfully explains what was used, revised, rejected, and learned	Identifies at least one useful revision or limitation	Reflection is vague or mostly descriptive	No meaningful reflection

Activity

Evidence Comparison Decision Memo

Objective

To help students develop a field-appropriate question, locate and evaluate multiple credible sources, identify connections across sources, and write a short decision memo that uses and recognizes information responsibly.

Context

At the Milestone level, students are expected to move beyond finding “a source” and begin using information strategically. They should develop questions with an appropriate scope for the field, implement search strategies using credible field-relevant resources, analyze source strengths and weaknesses, identify connections across sources, and provide appropriate recognition of the information used.

This activity gives students structured practice comparing multiple sources before making a decision. Research on source evaluation suggests that students often need support moving beyond general credibility language or unsupported claims about bias, expertise, and trustworthiness (Bobkowski & Younger, 2020). Research on synthesis also emphasizes that students need explicit practice identifying patterns, differences, and relationships across sources before they can use information effectively (Dahlen & Leuzinger, 2020).

Instructions

1. Assign or identify a decision scenario

Students begin with a decision, recommendation, interpretation, or problem relevant to the course. Examples:

- Public health: Which intervention should a campus prioritize to improve student well-being?
- Business: Which market should a company target for a new product?
- Engineering: Which design constraint should guide the next prototype revision?
- Education: Which instructional strategy would best support a specific learner group?
- Environmental studies: Which local sustainability action should receive funding first?

Activity

Evidence Comparison Decision Memo

2. Develop a focused question

Students turn the decision scenario into a question with an appropriate scope for the field. Students submit their question and briefly explain why it is appropriately scoped.

Example:
Decision scenario: A campus committee wants to improve student well-being.
Question: What evidence-based intervention is most likely to reduce stress among first-year college students?

3. Conduct a search and select sources

Students locate 3–4 sources using course-approved or field-relevant resources. Depending on the discipline, these may include peer-reviewed articles, professional reports, datasets, policy documents, clinical guidelines, trade publications, or credible public-facing sources.

For each source, students record:

- Full citation or source-identifying information
- Search tool or database used
- Search terms used
- Source type
- Why the source is relevant to the decision

4. Analyze source strengths and weaknesses

Students complete a comparison table for each source. Encourage students to avoid vague statements like “this source is credible.” Instead, they should explain what makes the source useful or limited for this specific decision.

Source	Strengths	Weaknesses/limits	Bias, expertise, point of view	Usefulness for decision

Activity

Evidence Comparison Decision Memo

5. Identify connections across sources

Students look across their sources and answer:

- Where do the sources agree?
- Where do they differ or complicate each other?
- What pattern, theme, or tension is emerging?
- What information is still missing?
- Which source seems most useful for the decision, and why?

6. Write a short decision memo

Students write a 1–2 page memo that includes:

- The decision or recommendation
- The question guiding their search
- A brief explanation of the sources used
- Key connections or tensions across sources
- A justified decision, recommendation, or next step
- Appropriate citation or recognition of sources

TIPS

- Use a real decision whenever possible. Students are more likely to see the value of information literacy when the task leads to a recommendation, choice, or action.
- Require more than one source type when appropriate. This helps students see how different kinds of evidence contribute differently to a decision.
- Push students to explain credibility in context. A source may be credible for one purpose but limited for another.
- Ask students to identify what they would still need to know. At the Milestone level, recognizing limits in the evidence is part of responsible decision-making.
- Consider having students compare their source tables in small groups before writing the memo.

Activity

Example Assessment

Source Comparison Table and Decision Memo

Students submit a completed source comparison table and a short decision memo. The assessment should focus on how well students connect their question, search strategy, source evaluation, synthesis, and final decision.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Question & Search Strategy	Develops a focused, field-appropriate question and uses a thoughtful search strategy with relevant tools and terms	Develops a clear question and uses an appropriate search strategy	Question or search strategy is present but broad, limited, or only partly aligned with the decision	No clear question or meaningful search strategy
Source Evaluation	Analyzes source strengths, limitations, bias, expertise, and point of view with specific evidence	Identifies relevant strengths and limitations with some attention to credibility or perspective	Evaluation is vague, checklist-like, or focused mostly on surface features	Does not meaningfully evaluate sources
Connections Across Sources	Clearly identifies patterns, tensions, agreements, or gaps across sources and uses them to inform the decision	Identifies some connections across sources and relates them to the decision	Summarizes sources mostly one at a time with limited connection-making	Does not identify connections across sources
Decision & Attribution	Makes a well-supported decision and recognizes sources clearly and appropriately	Makes a reasonable decision and provides source recognition with minor issues	Decision is weakly supported or attribution is incomplete/inconsistent	Decision is unsupported or source recognition is missing

AI-Supported Activity

AI-Assisted Source Comparison Practice

Objective

To help students practice comparing sources, identifying possible patterns or tensions, and strengthening a decision memo while maintaining responsibility for evaluating and attributing information.

Context

At the Milestone level, students need practice analyzing information rather than simply collecting it. AI can support this stage by helping students test their reasoning, identify possible connections across sources, and notice questions they may not have considered. However, AI should not replace the student's own search, source evaluation, or decision-making.

This activity uses AI as a structured thinking partner after students have already found real sources. Students ask AI to help them compare their own source notes, but they must verify the AI's claims against the original sources and decide what is actually useful. This reinforces the importance of external evidence in source evaluation and the need for students to build connections across sources themselves (Bobkowski & Younger, 2020; Dahlen & Leuzinger, 2020).

Instructions

1. Complete the initial source search first

Before using AI, students must locate 3–4 real sources and complete basic notes for each source:

- Citation or identifying information
- Source type
- Main idea
- Strengths and limitations
- Usefulness for the decision
-

Students should not ask AI to invent sources or citations.

AI-Supported Activity

AI-Assisted Source Comparison Practice

2. Prepare source notes for AI

Students paste only their own notes into the chatbot, not full copyrighted PDFs or articles unless the instructor has approved that use.

They should include:

- Their decision scenario
- Their research question
- A brief summary of each source
- Their current thinking about the decision

3. Ask AI to compare the sources

Students use the prompt template below to ask AI to identify possible agreements, tensions, missing information, and questions to consider.

4. Verify and annotate the AI response

Students review the AI output and mark each suggestion as:

- Useful and supported by my sources
- Possibly useful but needs checking
- Not supported by my sources
- Irrelevant or too broad

Students must explain at least two places where they accepted, revised, or rejected the AI's suggestion.

5. Revise the decision memo

Students revise their source comparison table or decision memo based on what they verified. The final memo should make clear that the decision is based on the student's evaluation of the sources, not on AI's output.

AI-Supported Activity

Prompt Template (for Student Use)

“I am practicing how to use information for decision-making. My decision scenario is: [describe decision]. My research question is: [insert question]. Below are my notes on 3–4 sources I found myself. Please help me compare these sources by identifying possible points of agreement, disagreement, tension, missing information, and questions I should consider before making a decision. Do not invent sources or facts. Base your response only on the notes I provide. After your comparison, list which claims I should verify before using them.”

Follow-up Questions to Ask

After the AI provides an initial response, students should practice asking specific follow-up questions to deepen their source comparison and test their reasoning.

Students can ask:

- Which sources seem to agree, and on what point?
- Which source appears most limited for this decision, and why?
- What is one possible bias or point of view I should examine more carefully?
- What information is missing from my current source set?
- What would strengthen my decision memo?
- What claims in your response should I verify before using?

TIPS

- Remind students that AI is comparing the notes they provide, not independently evaluating the original sources.
- Ask students to keep their AI transcript so they can show how they verified, revised, or rejected suggestions.
- Encourage students to challenge the AI. A good response is not “AI said this,” but “AI suggested this, and I checked it against my sources.”
- Use this activity before the final memo, not after, so students have time to revise their thinking.
-

Activity

Example Assessment

AI Comparison Transcript, Verification Notes, and Revised Memo

Students submit their AI transcript, a brief annotation of the AI response, and a revised decision memo or source comparison table.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Preparation of Source Notes	Provides clear, accurate notes from real sources that include relevance, strengths, and limitations	Provides usable notes from real sources with most required information	Notes are incomplete, vague, or weakly connected to the decision	Does not provide meaningful notes from real sources
Critical Engagement with AI Output	Clearly verifies, revises, or rejects AI suggestions using source evidence	Identifies useful and limited AI suggestions with some verification	Responds to AI output generally but with limited checking	Accepts AI output uncritically or does not engage
Source Comparison & Decision Revision	Uses verified insights to strengthen source comparison and improve the decision or recommendation	Makes at least one meaningful revision based on verified comparison	Revision is present but minor or weakly connected to evidence	No meaningful revision made
Responsible Use & Attribution	Clearly distinguishes student reasoning from AI support and attributes sources appropriately	Uses AI transparently and recognizes sources with minor issues	AI use or source attribution is unclear or inconsistent	AI output or source information is used without appropriate recognition

Activity

Evidence-Based Decision Brief

Objective

To assess students' ability to develop a discipline-informed question, execute and revise a search strategy, critique sources, synthesize evidence, and communicate an informed decision with ethical attribution.

Context

At the Capstone level, students should be able to articulate questions informed by key concepts, relevant terminology, and related questions in the field; execute and revise well-developed search strategies; critique information sources for bias, expertise, point of view, relevance, and currency; synthesize patterns across sources; exclude irrelevant information; communicate informed decisions; and attribute ethically accessed information using conventions appropriate to the field.

This activity asks students to bring the full information literacy process together in a discipline-specific decision brief. Research on synthesis emphasizes that students need structured opportunities to organize, interpret, analyze, and synthesize information from sources, not simply place sources beside one another (Dahlen & Leuzinger, 2020). Source evaluation research also suggests that students need to articulate credibility with evidence and disciplinary context rather than relying on general claims that a source is "credible" or "biased" (Bobkowski & Younger, 2020).

Instructions

1. Identify a discipline-specific decision

Students identify a real or realistic decision connected to the course. Examples:

- Public health: Which intervention should a local health department prioritize?
- Business: Should an organization expand into a new market?
- Engineering: Which design approach best meets the project constraints?
- Education: Which instructional strategy should be recommended for a specific learning context?
- Environmental studies: Which policy response should a community adopt?
- Humanities: Which interpretation, preservation strategy, or public-facing argument is best supported by available evidence?

Activity

Evidence-Based Decision Brief

2. Develop a field-informed question

Students develop a question that is appropriately complex for the field. Their question should include:

- Key concepts or variables
- Relevant disciplinary terminology
- A clear decision, recommendation, interpretation, or action
- Related subquestions that help guide the search

Example:
Instead of: "Is social media bad for students?"
Try: "What evidence should a university consider when deciding whether to develop a social media literacy program for first-year students?"

3. Execute and revise search strategy

Students conduct a well-developed search using resources appropriate to the discipline. Depending on the field, this may include scholarly databases, professional guidelines, datasets, policy reports, archival materials, trade publications, credible public-facing sources, or technical documentation.

Students document:

- Databases, tools, or repositories searched
- Keywords, synonyms, subject terms, or field-specific terminology used
- Search revisions and why they were made
- Inclusion and exclusion criteria
- Sources selected and sources rejected

4. Critique the source set

Students select a source set appropriate to the assignment and evaluate each source for:

- Relevance to the decision
- Expertise or authority
- Bias, point of view, or purpose
- Currency or timeliness
- Strengths and limitations
- Role in the final decision

Students should explain not only whether a source is useful, but how and for what purpose it is useful.

Activity

Evidence-Based Decision Brief

5. Synthesize evidence and exclude irrelevant information

Students create a synthesis matrix, evidence map, or annotated outline that identifies:

- Patterns across sources
- Points of agreement
- Contradictions or tensions
- Gaps in the available information
- Sources or details excluded from the final decision and why

The goal is for students to show how evidence works together, not simply summarize sources one at a time.

6. Write and present the decision brief

Students produce a written decision brief, presentation, or both. The final product should include:

- The decision or recommendation
- The field-informed question
- A brief overview of the search and source selection process
- A synthesis of the strongest evidence
- A discussion of limitations or uncertainty
- A clear conclusion or recommended next step
- Ethical attribution using field-appropriate conventions

TIPS

- Encourage students to choose decisions that have genuine stakes, but keep the scope manageable.
- Require students to submit process artifacts before the final brief, such as a search log, source critique table, or synthesis matrix.
- Push students to explain why some information was excluded. Capstone-level information literacy includes knowing what not to use.
- Consider building in peer review focused only on source evaluation and synthesis before students submit the final brief.
- Invite students to name uncertainty honestly. A strong decision brief does not pretend the evidence is perfect; it explains how the decision is still justified.

Activity

Example Assessment

Evidence-Based Decision Brief and Process Portfolio

Students submit a final decision brief along with process artifacts, such as a search log, source critique table, synthesis matrix, and reference list.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Question & Search Strategy	Develops a field-informed question using key concepts and terminology; executes and revises a well-developed search strategy using appropriate resources	Develops a clear question and uses an appropriate search strategy with some revision	Question or search strategy is present but limited, underdeveloped, or only partly field-aligned	No clear question or meaningful search strategy
Source Critique & Selection	Thoroughly critiques sources for relevance, expertise, bias, point of view, currency, and usefulness; clearly justifies inclusion and exclusion	Evaluates sources with attention to credibility and relevance; explains most source choices	Evaluation is uneven, general, or focused mostly on surface-level credibility indicators	Does not meaningfully evaluate or justify sources
Synthesis & Decision-Making	Synthesizes patterns, tensions, and gaps across sources; excludes irrelevant information; makes a well-supported decision	Identifies connections across sources and makes a reasonable evidence-based decision	Mostly summarizes sources one at a time; decision is only partly supported	Decision is unsupported or not clearly connected to evidence
Communication & Ethical Attribution	Communicates the decision clearly and persuasively; attributes information consistently using field-appropriate conventions	Communicates the decision clearly with minor issues in attribution or source integration	Communication or attribution is inconsistent, incomplete, or difficult to follow	Decision is unclear and/or source attribution is missing

AI-Supported Activity

AI-Assisted Evidence Stress Test

Objective

To help students stress-test an evidence-based decision by using AI to identify potential gaps, alternative interpretations, counterarguments, and assumptions while requiring students to verify all suggestions against credible sources.

Context

At the Capstone level, AI can be useful as a stress-testing tool: it can help students identify possible gaps, counterarguments, stakeholder concerns, or alternative interpretations. However, AI should not replace the student's search, source evaluation, synthesis, or decision-making. The student remains responsible for verifying information and attributing sources ethically.

This activity asks students to use AI only after they have developed their own question, completed a search, evaluated sources, and drafted an initial decision. This approach reinforces the importance of external verification and source-grounded reasoning. Research on lateral reading shows that students benefit from learning to verify claims through additional sources rather than relying on surface-level cues or single-source judgments (Breakstone et al., 2021; McGrew, 2024).

Instructions

1. Complete the evidence brief draft first

Before using AI, students should have:

- A field-informed question
- A documented search strategy
- A source critique table
- A synthesis matrix or evidence map
- A draft decision or recommendation

Students should not ask AI to create sources, citations, or evidence.

2. Input only student-generated notes

Students paste a summary of their decision scenario, question, source notes, synthesis findings, and draft decision into a chatbot. They should not paste full copyrighted texts unless the instructor has approved that use.

AI-Supported Activity

AI-Assisted Evidence Stress Test

3. Ask AI to stress-test the decision

Students use the prompt template below to ask AI to identify:

- Assumptions in the decision
- Possible counterarguments
- Missing perspectives or stakeholder concerns
- Evidence gaps
- Alternative interpretations
- Claims that need stronger support

4. Verify and annotate the AI response

Students annotate the AI output using four labels:

- Supported by my sources
- Worth investigating
- Not supported by my sources
- Irrelevant or misleading

Students must verify any AI suggestion they plan to use by returning to their original sources or locating additional credible sources.

5. Revise the decision brief

Students revise their decision brief based on what they verified. The revision should strengthen the evidence base, clarify limitations, address counterarguments, or refine the decision.

6. Submit an AI use reflection

Students submit a short reflection explaining:

- What AI helped them notice
- What they rejected or corrected
- What they verified through sources
- How the stress test changed their final decision
- How they maintained responsibility for the final work

AI-Supported Activity

AI-Assisted Evidence Stress Test

Prompt Template (for Student Use)

"I am developing an evidence-based decision brief. My decision scenario is: [describe scenario]. My field-informed question is: [insert question]. My draft decision is: [insert decision]. Below are my notes from sources I found and evaluated myself: [paste source notes and synthesis findings]. Please stress-test my decision. Identify possible assumptions, counterarguments, missing perspectives, stakeholder concerns, evidence gaps, and alternative interpretations. Do not invent sources or facts. Base your response only on the notes I provide, and clearly identify any claims I would need to verify before using."

Follow-up Questions to Ask

Students can ask:

- Which part of my decision is least supported by the evidence I provided?
- What counterargument would a skeptical expert or stakeholder raise?
- What perspective might be missing from my source set?
- Which evidence seems most relevant to the decision, and which seems less relevant?
- What claim should I verify before including it?
- What limitation should I acknowledge more clearly?

TIPS

- Emphasize that AI is a challenger, not an authority.
- Require students to document where they accepted, revised, or rejected AI feedback.
- Encourage students to push back when the AI overstates, invents, or misreads their evidence.
- Consider having students compare one AI-generated counterargument with one peer-generated counterargument.
- Remind students that ethical AI use includes transparency about how the tool supported their process.

Activity

Example Assessment

AI Stress-Test Log, Verification Notes, and Revised Decision Brief

Students submit their AI transcript, annotated verification notes, revised decision brief, and short reflection on how AI affected their final thinking.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Preparation & Source Grounding	Uses AI only after developing a clear question, source set, synthesis notes, and draft decision grounded in real sources	Uses AI after completing most required source-grounded preparation	Preparation is incomplete or weakly connected to real sources	Uses AI without meaningful source-grounded preparation
Critical Evaluation of AI Output	Carefully verifies, revises, or rejects AI suggestions using source evidence and clear reasoning	Identifies useful and limited AI suggestions with some verification	Engages with AI output generally but with limited checking	Accepts AI output uncritically or does not evaluate it
Revision & Decision Strengthening	Makes specific, evidence-based revisions that strengthen the decision, address limitations, or clarify uncertainty	Makes at least one meaningful revision based on verified feedback	Revision is present but minor, vague, or weakly connected to evidence	No meaningful revision made
Responsible AI Use & Attribution	Clearly explains how AI was used, distinguishes AI support from student reasoning, and attributes sources appropriately	Describes AI use and attributes sources with minor issues	AI use or source attribution is unclear or inconsistent	AI output or source information is used without appropriate recognition

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Additional Resources

Essential Skill 10: Information Literacy

Podcasts

"Deep Background: Using AI as a Co-Reasoning Partner with Mike Caulfield" Teaching in Higher Ed Podcast
https://teachinginhighered.com/podcast/deep-background-using-ai-as-a-co-reasoning-partner-with-mike-caulfield/

"Communication Literacy in the Age of AI" Teaching in Higher Ed Podcast
https://teachinginhighered.com/podcast/communication-literacy-in-the-age-of-ai/

"Lateral Reading & Other Media Literacy Skills" Education for Sustainable Democracy
https://podcasts.apple.com/us/podcast/lateral-reading-other-media-literacy-skills-with-sarah/id1531797928?i=1000642383833

"Information Literacy with Becky Miller" The Learning Curve
https://academiccommons.jefferson.edu/thelearningcurve/7.cfm

Web Resources & Articles

"ACRL Framework for Information Literacy for Higher Education" Association of College & Research Libraries
https://www.ala.org/acrl/standards/ilframework

"ACRL Framework for Information Literacy Sandbox" Association of College & Research Libraries
https://sandbox.acrl.org/welcome

"Teaching Lateral Reading" Civic Online Reasoning
https://cor.inquirygroup.org/curriculum/collections/teaching-lateral-reading/

"Intro to Lateral Reading" Civic Online Reasoning
https://cor.inquirygroup.org/curriculum/lessons/intro-to-lateral-reading/

"SIFT: The Four Moves" Hapgood
https://hapgood.us/2019/06/19/sift-the-four-moves/

"Check, Please! Starter Course Released" Hapgood
https://hapgood.us/2019/08/13/check-please-starter-course-released/

"Key Findings" Project Information Literacy
https://projectinfolit.org/key-findings

"Learning the Ropes: How Freshmen Conduct Course Research Once They Enter College" Project Information Literacy
https://eric.ed.gov/?id=ED548262

"Teaching Information Literacy in an Age of Misinformation" Faculty Focus
https://www.facultyfocus.com/articles/effective-classroom-management/teaching-information-literacy-in-an-age-of-misinformation/

"How to Teach Students Critical Thinking Skills to Combat Misinformation" APA Monitor on Psychology
https://www.apa.org/monitor/2024/09/media-literacy-misinformation

"Research and Citation Resources" Purdue OWL
https://owl.purdue.edu/owl/research_and_citation/resources.html

"Checkology Resources" News Literacy Project
https://newslit.org/checkology-resources/