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.

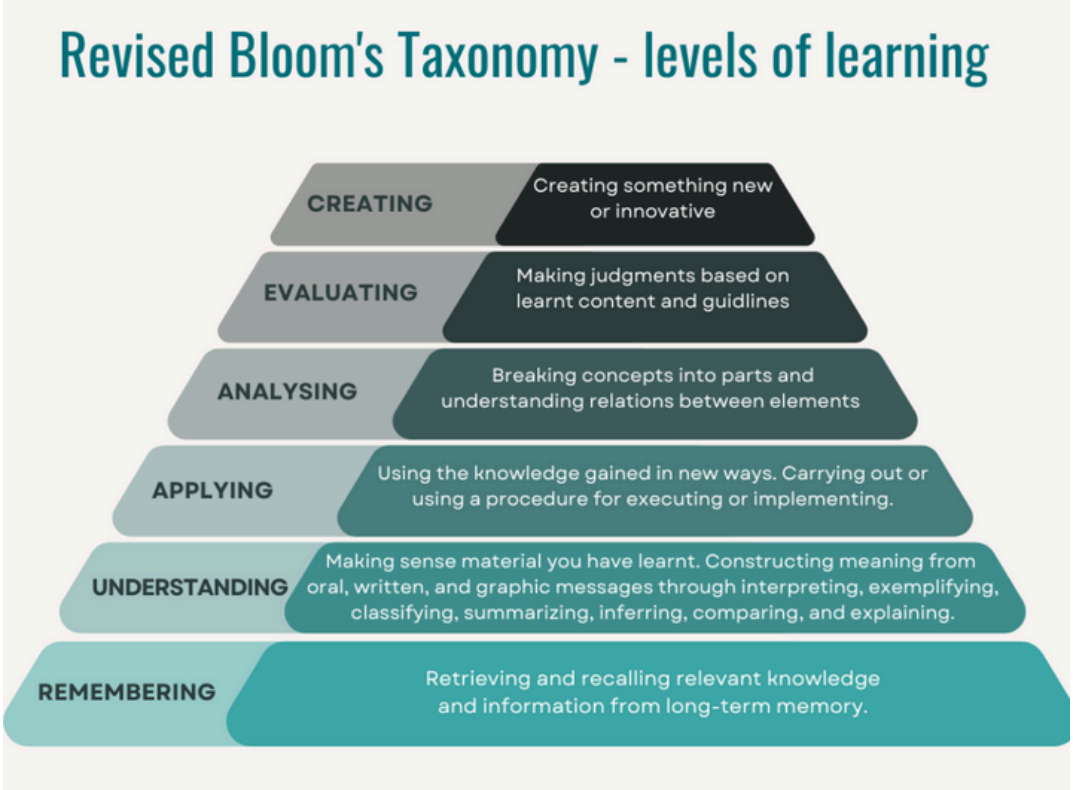
I**nstead of**: *Students will understand research methods in sociology.*

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.



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 2

THINK CRITICALLY
IN ORDER TO SOLVE PROBLEMS AND CREATE NEW IDEAS AND SOLUTIONS

Graduates will develop their ability to think critically by evaluating assumptions and assessing information to make informed conclusions. They will also learn to think creatively by combining ideas in original ways or developing new ways of addressing.

Essential Skill 2
THINK CRITICALLY

Why It Matters

Critical thinking is at the heart of intellectual and professional success. It enables students to assess information, challenge assumptions, and synthesize diverse perspectives to make informed decisions. Whether analyzing case studies, evaluating research, or solving real-world problems, students who develop critical thinking skills become more adaptable and innovative. Employers consistently rank critical thinking as one of the most in-demand skills, as it underpins effective problem-solving and decision-making across industries (National Association of Colleges and Employers, 2021).

Beyond professional success, critical thinking empowers students to engage thoughtfully with complex societal issues, distinguishing credible sources from misinformation and navigating ambiguity with confidence. By fostering this skill, instructors equip students with the tools to approach problems with intellectual curiosity, creativity, and a commitment to evidence-based reasoning.

Integrating This Skill into Your Course

To support students in developing critical thinking and creative problem-solving, consider the following strategies:

- Explicitly define critical thinking expectations. Help students understand what it means to critically evaluate information, weigh alternatives, and develop well-reasoned conclusions.
- Use open-ended problems and real-world case studies. Assignments that require students to analyze ambiguous situations encourage deeper engagement and intellectual flexibility.
- Encourage synthesis across disciplines. Assignments that require students to integrate diverse viewpoints foster innovation and creative problem-solving.
- Emphasize metacognition. Ask students to reflect on their thinking process, identifying where their assumptions or biases may influence their conclusions.

By embedding these practices into coursework, instructors create opportunities for students to build the habits of inquiry, analysis, and synthesis essential for lifelong learning.

Addressing Student Buy-In

Students may resist critical thinking-focused activities for various reasons, including discomfort with ambiguity, fear of being wrong, or reliance on memorization-based learning. To increase engagement:

- Normalize uncertainty and complexity. Explain that critical thinking involves grappling with incomplete information and revising conclusions as new evidence emerges.
- Validate students' initial instincts while encouraging deeper inquiry. Acknowledge that their first response to a question may be valid but challenge them to provide evidence and consider alternative perspectives.
- Demonstrate real-world relevance. Show how critical thinking applies beyond the classroom — whether in professional decision-making, personal life, or civic engagement.
- Provide structured support. Scaffold assignments with guiding questions and clear criteria to help students feel confident in their analytical process.

When students understand that critical thinking is a skill they can develop, rather than an innate ability they either have or don't, they become more willing to engage with complex challenges.

Ways to Identify Critical Thinking Skill Development in Your Courses

Instructors may already be fostering critical thinking without labeling it explicitly. Recognizing these moments allows for greater intentionality in supporting student growth. Look for:

- Assignments that require students to evaluate evidence. Are students assessing the credibility of sources, data, or arguments?
- Opportunities for perspective-taking. Do students engage with viewpoints different from their own and revise their thinking based on new information?
- Synthesis-based activities. Are students combining ideas from different disciplines or integrating diverse perspectives to develop novel solutions?
- Decision-making scenarios. Do students weigh alternatives and justify their choices based on reasoned analysis?
- By identifying where critical thinking already occurs, instructors can make these moments more visible and refine assignments to strengthen skill development.

Example Scaffolded Skill Assignment Progression

A structured approach ensures students develop critical thinking gradually, moving from basic evaluation to sophisticated problem-solving By gradually increasing the complexity of critical thinking tasks, students gain confidence and proficiency, ensuring they leave the course with a refined ability to assess, synthesize, and innovate.

Stage	Activity Example
Early Semester	Low-stakes exercises analyzing the credibility of sources, identifying assumptions in arguments, and practicing perspective-taking.
Mid-Semester	Structured debates, problem-solving case studies, and assignments requiring synthesis of multiple viewpoints.
End of Semester	Capstone projects, research papers, or innovation challenges where students propose well-supported solutions to complex problems.

References

Styers, M. K., & Walker, S. E. (2023). Enabling critical thinking development in higher education through problem-based learning. Irish Educational Studies, 42(3), 345-360. https://doi.org/10.1080/03323315.2023.2258497

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Essential Skill 2:

Think critically in order to solve problems and create new ideas and solutions.

Graduates will think critically by evaluating assumptions and assessing information to make informed conclusions. They will also think creatively by combining ideas in original ways or developing new ways of addressing issues.

Benchmark College entry	**Milestone** End of 2 years of college	**Capstone** Bachelor's degree completion
Describes a problem in general terms based on gathered information.	Identifies aspects of a problem clearly by locating and using relevant sources of information.	Analyzes a problem and its components accurately using credible sources, data, and information.
Acknowledges personal perspectives and how these may help or hinder problem-solving.	Seeks out and considers different perspectives on a problem.	Evaluates alternative perspectives, allowing new information to add depth to thinking about a problem.
Compiles possible solutions that are loosely connected to a problem.	Articulates patterns, relationships, context, and other factors that are relevant to a problem.	Evaluates reasonable implications and weighs and synthesizes significant evidence and relevant perspectives to draw informed and innovative conclusions about a problem and potential solutions.
Contributes ideas that reflect an understanding of a problem in a brainstorming session.	Links concepts to generate novel ideas or solutions to problems.	Integrates diverse perspectives to propose an innovative idea or solution.

Instructional Materials

Explore adaptable example activities, assignments, and assessments

Activity

Analyzing and Evaluating Arguments

Objective

To help students recognize argument structures, differentiate between claims and evidence, and identify reasoning flaws in written or spoken arguments.

Context

Students often struggle to distinguish opinion from evidence-based reasoning and may not recognize logical fallacies in everyday discourse. Research suggests that explicit instruction in argument analysis improves students' ability to critically evaluate sources and arguments (van Gelder, 2005). Kuhn (1991) further emphasizes that students develop stronger reasoning skills when they actively engage with argument deconstruction rather than passively consuming content.

Without guided practice, students may default to personal opinions rather than analyzing claims through logical reasoning and evidence-based support (Brookfield, 2017). This activity provides a structured approach to breaking down arguments, making it easier for students to recognize sound vs. weak reasoning in academic and everyday contexts.

Instructions

1. Argument Breakdown Exercise

- Provide students with a short editorial, news article, or social media post containing an argument.

2. Labeling Key Components

- Ask students to. highlight and label:
  - Claim: The main point the author is making.
  - Evidence: The data, research, or examples used to support the claim.
  - Reasoning: How evidence is connected to the claim.

Activity

Instructions continued

3. Small Group Discussions

- Students compare their findings and discuss where reasoning is strong or weak.

4. Instructor-Guided Debrief

- Discuss common fallacies, assumptions, or gaps in reasoning present in student-identified arguments.

Adaptations for Different Course Sizes & Modalities

For Large Lecture Courses:

- Use Google Forms or Canvas quizzes where students label parts of an argument and submit responses for auto-grading.
- Assign pre-class readings and use in-class polling (e.g., Poll Everywhere) to gauge understanding.

For Online Courses:

- Use discussion boards where students post breakdowns of an argument and comment on two peers' responses.
- Provide interactive video lectures where students practice labeling claims and reasoning in real time.

For Small Seminars:

- Conduct live argument breakdowns in small groups.
- Assign role-play debates where students must switch positions mid-discussion.

Activity

Example Assessment

Short Response Assignment

- Students receive an editorial on a controversial topic and submit a one-page breakdown identifying the claim, evidence, reasoning, and potential weaknesses in the argument.
- Instructors may provide a rubric to guide evaluation (see example rubric below).

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Identifies Claim	Clearly identifies and articulates the central claim	Identifies claim but lacks clarity	Misinterprets main claim	Fails to identify the claim
Recognizes Evidence	Accurately distinguishes strong vs. weak evidence	Identifies some evidence but lacks analysis	Struggles to differentiate supporting evidence	Fails to recognize evidence
Evaluates Reasoning	Clearly explains how evidence supports the claim	Provides some analysis of reasoning	Limited discussion of reasoning connections	No discussion of reasoning
Recognizes Logical Fallacies	Identifies fallacies and explains impact	Recognizes some fallacies with brief explanations	Identifies fallacies but does not explain impact	Fails to identify logical errors

AI-Supported Activity

Interactive Argument Analysis with AI Chatbots

Objective

To help students practice evaluating arguments and spotting weak reasoning using AI chatbots in a low-stakes environment.

Context

AI-powered tools provide instant feedback on argument quality, allowing students to engage in iterative reasoning exercises. Studies show that AI-assisted critical thinking activities help students identify logical errors and rhetorical biases by exposing them to multiple perspectives in a short timeframe (Mollick & Mollick, 2023). Additionally, AI chatbots can generate arguments with intentional flaws, giving students opportunities to test their reasoning skills in a guided way.

Instructions

1. Initial Prompt
   - Students use an AI chatbot (e.g., ChatGPT, Claude, Perplexity) and input:
     - *"Give me an argument for why [controversial issue] is true, but include logical fallacies and weak reasoning."*
2. Identification Task
   - Students analyze the AI-generated response and highlight logical fallacies, missing evidence, or reasoning flaws.
3. Follow-Up Questions:
   - Students ask the AI:
     - *"What fallacies were in your response?"*
     - *"Can you rewrite this argument using stronger reasoning and better evidence?"*
4. Reflection:
   - Students write a brief reflection on:
     - *"What were the most common reasoning errors?"*
     - *"How did the AI improve its argument when prompted?"*

AI-Supported Activity

Adaptations for Different Course Sizes & Modalities

For Large Lecture Courses:

- Provide pre-written AI outputs for students to analyze.
- Use Canvas quizzes where students classify fallacies and weaknesses.

For Online Courses:

- Assign AI analysis as asynchronous work with students sharing findings in discussion boards.

For Small Seminars:

- Conduct live AI critiques with instructor-guided discussions.

Activity

Example Assessment

AI Reflection Assignment

- Students submit a side-by-side comparison of the original flawed AI argument and the improved version.
- A 300-word reflection explains the changes and what they learned about strong reasoning.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Identifies Logical Fallacies	Correctly identifies and explains multiple fallacies	Identifies some fallacies but lacks depth	Struggles to identify fallacies	No fallacies identified
Improves AI Argument	Successfully prompts AI to provide significantly better reasoning	Some improvement but reasoning still weak	Minimal change in AI-generated argument	No improvement in AI output
Reflection & Analysis	Thoughtful and well-supported reflection on critical thinking skills	Some analysis but lacks depth	Surface-level reflection with minimal insight	No reflection provided

Activity

Synthesizing Multiple Perspectives

Objective

To help students engage with multiple viewpoints and integrate evidence from diverse sources into a cohesive argument.

Context

Research shows that effective critical thinkers actively consider competing viewpoints before forming conclusions (Brookfield, 2017). However, many students struggle with synthesizing multiple perspectives and instead default to summarizing or favoring a single viewpoint.

This activity is designed to scaffold comparative analysis, pushing students beyond simple agreement or disagreement into evaluating relationships between perspectives. By mapping how different viewpoints interact, students develop the ability to synthesize rather than merely contrast information.

Instructions

1. Topic Exploration

- Assign students a complex, debatable topic (e.g., “Should AI-generated content be regulated in higher education?”).

2. Source Collection

- Students gather three sources with differing perspectives (e.g., scholarly articles, policy papers, news reports).

3. Synthesis Mapping

- Students create a concept map showing key arguments and how they connect.
  - They identify where perspectives align, contradict, or introduce new questions.

Activity

Instructions continued

4. Structured Debate or Written Reflection

- Option 1: Debate
  - Students defend one viewpoint, then switch and argue the opposing side.
- Option 2: Reflection
  - Students write a synthesis essay answering:
    - "How do these perspectives shape my understanding of the issue?"
    - "What is the strongest evidence across all sources?"
    - "What gaps or limitations exist in these perspectives?"

Adaptations for Different Course Sizes & Modalities

For Large Lecture Courses:

- Use Google Docs, Canva, or LucidChart collaboration for shared concept mapping before assigning individual reflections.
- Incorporate peer feedback using Canvas peer review for drafts.

For Online Courses:

- Assign AI-generated summaries for students to critique and compare with scholarly sources.
- Use Canva Whiteboards or LucidChart for asynchronous visual synthesis mapping.

For Small Seminars:

- Hold structured roundtable debates where students rotate between perspectives.
- Use role-playing exercises where students embody different stakeholders (e.g., policymakers, scientists, business leaders).

Activity

Example Assessment

Source Synthesis Paper *(3-5 pages)*

- Students analyze and integrate at least three different perspectives, comparing their strengths, weaknesses, and implications.
- They must conclude by presenting a reasoned synthesis rather than simply summarizing different viewpoints.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Integration of Perspectives	Synthesizes multiple viewpoints into a cohesive argument	Attempts synthesis but mostly summarizes sources	Lists sources but does not synthesize them	Lacks analysis of multiple perspectives
Use of Evidence	Supports synthesis with well-chosen, credible sources	Uses sources, but some may be weak or misrepresented	Includes sources but lacks depth in analysis	Minimal or no use of supporting evidence
Critical Analysis	Identifies limitations, gaps, and implications of perspectives	Discusses sources but lacks depth in critique	Mentions limitations but does not analyze them	Fails to address weaknesses in perspectives
Writing Clarity & Organization	Logical flow, clear thesis, and well-supported claims	Mostly well-organized with minor lapses in clarity	Some disorganizatio n, unclear thesis	Lacks structure and coherence

Activity

Problem-Solving with Critical Thinking

Objective

To engage students in real-world problem-solving, requiring them to apply research, reasoning, and interdisciplinary knowledge.

Context

At the capstone level, critical thinking should be applied to authentic, open-ended challenges that require evidence-based decision-making (Pascarella & Terenzini, 2005).

Students should be encouraged to work on complex, interdisciplinary problems that mirror those they may encounter in their careers. The ability to synthesize diverse viewpoints, evaluate trade-offs, and propose feasible solutions is crucial for professional and civic decision-making (Brookfield, 2017).

Instructions

1. Real-World Problem Selection

- Students choose a societal or disciplinary challenge (e.g., "How should AI hiring tools be regulated to prevent bias?").

2. Interdisciplinary Research

- Students consult multiple fields (e.g., law, ethics, computer science) to gather relevant insights.

3. Solution Development

- Students present a proposed solution in one of the following formats:
  - Policy proposal
  - TED Talk-style presentation
  - White paper with recommendations

Activity

Instructions continued

4. Peer & Expert Feedback

- Students defend their reasoning before peers and, if possible, guest experts.

Adaptations for Different Course Sizes & Modalities

For Large Lecture Courses:

- Use group projects where teams present policy briefs or research proposals.
- Offer pre-recorded video submission options for presentations.

For Online Courses:

- Assign asynchronous debates where students present and respond to opposing arguments in recorded videos.
- Use interactive multimedia (e.g., Flipgrid, Loom) for student presentations.

For Small Seminars:

- Encourage live expert panels where students present their findings to faculty and industry professionals.
- Use iterative draft feedback where students refine arguments over multiple weeks.

Example Assessment

Final Project Presentation & Report

- Students develop a policy report, research proposal, or multimedia presentation arguing for a well-supported solution to a complex problem.
- Assessment includes evaluating trade-offs, considering stakeholder needs, and using evidence-based reasoning.

Activity

Example Assessment

Final Project Presentation & Report Rubric

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Problem Identification	Clearly defines problem with detailed context	Defines problem but lacks some depth	Vague problem definition	No clear problem identified
Interdisciplinary Integration	Incorporates multiple disciplines effectively	Includes interdisciplinary insights but lacks depth	Uses only one discipline's perspective	No interdisciplinary integration
Solution Development	Proposes well-reasoned, feasible solution with strong evidence	Proposes solution but lacks consideration of trade-offs	Suggests solution but lacks evidence	No clear solution proposed
Argument & Justification	Provides strong reasoning through evidence	Argument is logical but lacks full support	Argument is weak or based on assumptions	No logical argument presented
Presentation/Writing Quality	Highly polished, clear, and professional	Well-organized with minor errors	Some lack of clarity, structural issues	Poorly written or difficult to follow

Additional Resources

Essential Skill 2: Think Critically

Podcasts

"Critical Thinking in Theory and Practice" *Teaching in Higher Ed*
https://teachinginhighered.com/podcast/rethinking-critical-thinking/

"Rethinking Critical Thinking" *Teaching in Higher Ed*
https://teachinginhighered.com/podcast/critical-thinking-in-theory-and-practice/

Web Resources

"How to teach critical thinking to beginners"
https://www.timeshighereducation.com/campus/how-teach-critical-thinking-beginners

"Using directional reflection to stimulate students' evaluative thinking"
https://www.timeshighereducation.com/campus/using-directional-reflection-stimulate-students-evaluative-thinking

"Using philosophy to enhance online students' critical thinking skills"
https://www.timeshighereducation.com/campus/using-philosophy-enhance-online-students-critical-thinking-skills

"How to embed critical thinking from course design to assessment"
https://www.timeshighereducation.com/campus/how-embed-critical-thinking-course-design-assessment

"What is affective learning and how can it foster engagement and critical thinking"
https://www.timeshighereducation.com/campus/what-affective-learning-and-how-can-it-foster-engagement-and-critical-thinking

"CAE Critical Thinking Skills Overview" (PDF)
https://cae.org/resources/critical-thinking-skills-curriculum-overview/?utm_source=pressrelease&utm_medium=globenewswire&utm_term=101124-critical-thinking-skills-curriculum-press-release&utm_content=&utm_campaign=general