

A Literacy Targeted Approach to Teaching Decision-making Using the PACED Model¹

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Abstract: The PACED decision-making model (Problem, Alternatives, Criteria, Evaluate, Decision) offers a structured framework for teaching economic reasoning, making it an ideal tool for literacy-targeted economics instruction. This paper demonstrates how the PACED model aligns with a literacy-targeted approach by focusing on the application of foundational economic concepts—scarcity, opportunity cost, and trade-offs—to real-world scenarios. Participants will learn practical strategies for incorporating the PACED model into their courses, promoting active learning, and improving students' ability to analyze economic choices systematically.

¹ The views expressed here are not the views of the Federal Reserve Bank of St. Louis, the Federal Reserve Board, or the Federal Reserve System.

Decision-making in the Introductory Economics Course

Alfred Marshall once described economics as “the study of mankind in the ordinary business of life.” People make economic decisions as workers, consumers, savers, and citizens as they go about living. In fact, at its core, economics is the study of how individuals and groups make choices in the face of limited resources. Framing the discipline through the lens of decision-making allows students to connect economic thinking to their everyday lives immediately.

A key concept that comes up early in an economics course is opportunity cost—the value of the next best alternative when a decision is made; it’s what is given up. This concept helps students start to see that every choice involves trade-offs. Starting an economics course with decision-making allows students to see how economics applies to their lives. These everyday examples help students realize that economics isn’t just theory; it’s something they live every day. By beginning with decision-making, students grasp essential economic concepts and build critical thinking skills. They start to see the world through an economic lens, questioning why people and institutions behave as they do. This curiosity and analytical mindset often spark greater engagement with the subject, making decision-making a powerful and practical introduction to the economic way of thinking. In fact, decision-making lies at the core of economic literacy. Banaszak (1987) says economic literacy “involves knowing and applying fundamental economic ideas to make rational decisions about the use of limited resources.”

The Literacy-Targeted Approach to Economic Education

Instructors often design their courses to prepare their principles students for intermediate courses. They include models and theories that transfer to upper-level courses, assuming that students will choose to major in economics. However, of the students who take principles, over 80 percent are one-and-done — they never take another economics course. And of those who take at least one additional course, only 2 percent go on to major in economics (Stock, 2024).

Given the data, rather than designing the principles course for future econ majors, we propose a literacy-targeted course that focuses content on the 80 percent of students who will never take another course. The literacy-targeted (LT) approach argues that it is far more valuable for students to understand and apply core economic concepts well, than to be exposed to a wide range of concepts they will soon forget (Cohen, Stock, Wolla, 2023).

This is not a new argument. A report to the American Economic Association in 1950 said, “The number of objectives and the content of the elementary course should be reduced” (Hewitt, *et al.* p. 56). In 1963 George Stigler (p.657) said it this way: “The watered-down encyclopedia which constitutes the present course in beginning college economics does not teach the student how to think on economic questions. The student will memorize a few facts, diagrams, and policy recommendations and ten years later will be as untutored in economics as the day he entered the class.” In 1998 Robert Frank argued for a short list of core ideas with repeated applications.

While many agree with the sentiment of reducing the number of concepts and models in the introductory course, few have offered specifics. Hansen, Salemi, and Siegfried (2002) recommended using the National Voluntary Content Standards in Economics as a guide for narrowing the content.

Concerning decision-making, the forthcoming 3rd edition of the National Content Standards in Economics lays out 18 standards, one of those eighteen standards is focused entirely on decision-making. The benchmarks for this standard include core economic ideas such as scarcity, opportunity cost, incentives, considering tradeoffs, weighing costs and benefits, thinking at the margin, and recognizing unintended consequences.

Beyond inclusion in the national standards, many economic educators have argued that students should come away from a principles course with the economic reasoning skills to make informed decisions. Salemi explains it this way,

*“An alternative goal for the first course is to provide students with ... a deeper understanding and working knowledge of a short list of economics concepts. In a short-list course, students *apply concepts to decisions like those they will make at home and at work, and use them to interpret national and international economic news and policy* (Salemi 2005, 47).”*

Salemi’s desire for students to learn how to apply economic concepts aligns well with the idea economic literacy, interpreted as a person’s ability to use knowledge and skills to understand and interact with the world. Sigfried et al. says the goal of the economics major is,

“to empower students with a self-sustaining capacity to think and learn, and to take an active role in their education. They should know how to pose questions, collect information, identify and use an appropriate framework to analyze that information, and come to some conclusion. The end result is to qualify students to make informed decisions about their lives and communities long after their college experience” Siegfried et al. (1991, 201–202).”

This focus on economic decision-making provides educators with an avenue by which they can connect economic content to the daily lives of students as well the analysis and discussion of economic policy. For that we turn to a formalized decision-making model.

The PACED Decision-making Model

The PACED decision-making model offers a systematic process providing students with a framework for thinking through decisions using a logical approach. The model provides a framework for students to consider the alternatives, weigh the costs and benefits, and make a choice while acknowledging tradeoffs. The PACED model breaks the decision-making process down by clearly stating the **problem**, identifying the **alternatives**, what **criteria** the alternatives must meet, using the criteria to **evaluate**, and then bringing it all together to make a **decision** (PACED).

At the heart of both the PACED model and the literacy-targeted approach is a focus on doing economics—not just learning about it. The PACED model trains students to recognize scarcity, opportunity cost, and trade-offs in any decision. These are foundational concepts that, when understood well, empower students to think critically and make reasoned judgments across a wide array of contexts. In this way, the PACED model operationalizes the philosophy behind literacy-targeted instruction, making abstract concepts actionable and relevant. The PACED model gives

students a hands-on way to think through real-life choices using basic economic principles. It's not just a classroom theory—it's a tool they can use.

The PACED model is a repeatable strategy that demystifies economic reasoning. Students not only learn definitions but actively apply these concepts to make informed choices. Making informed decisions aligns with the goals of a literacy-targeted approach by focusing on essential economic understandings that are both transferable and relevant to the student. By integrating the PACED guide into instruction, educators equip students with a durable cognitive framework that helps them navigate personal, civic, and societal decisions through an economic lens.

The PACED model simplifies complex decisions by breaking them into manageable steps. This logical approach encourages students to think critically, weigh trade-offs, and recognize opportunity costs. Below are the five steps of the PACED model, which are used with a table (as seen in the Appendix):

1. **Problem Identification (P)**
 - The first step is to define the **P**roblem. Why must you make a choice?
 - In economics, this could involve deciding how to allocate a limited resource, selecting a production method, or choosing between policy options.
 - Example: A student may face the problem of deciding how to allocate \$50 from their budget between entertainment, savings, and groceries.
2. **Alternatives (A)**
 - List the **A**lternatives. What are your possible options?
 - Encourage brainstorming and creativity without immediate judgment.
 - Example: A student could consider spending all \$50 on entertainment, saving it, splitting it between needs and wants, or donating it.
3. **Criteria (C)**
 - Determine the **C**riteria. What standards are important to you?
 - Economic criteria might include cost, convenience, personal satisfaction, long-term benefits, or environmental impact.
 - Example: When deciding how to spend their budget, students may consider affordability, enjoyment, and future financial goals.
4. **Evaluate (E)**
 - **E**valuate the Alternatives. How well does each alternative meet each criterion?
 - This step often involves using a decision-making grid, scoring system, or simple pros and cons analysis.
 - Example: A student might rank alternatives on a scale, or points, based on their criteria, revealing which option offers the most value.
5. **Decide (D)**
 - Make a **D**ecision. Which option has the most favorable trade-offs?
 - Encourage reflection on trade-offs and opportunity costs.
 - Example: The student may spend \$50 on groceries and entertainment and forego saving.

Connections to the Principles Content

The PACED activity provided in the appendix is easily transferable to the classroom. Further, the PACED Model can be easily incorporated into the course content and used for guided discussion. For example, professors have a vested interest in showing their students the benefits of majoring in economics. One approach might be to have students pick economics and three other majors, determine their own criteria, and then use the data in the Occupational Outlook Handbook provided by the U.S. Bureau of Labor Statistics and other sources to complete the PACED model.

In microeconomics, the PACED model could be employed in a classroom discussion focused on different alternative environmental policy approaches: laissez-faire, cap-and-trade, pollution tax, or strict regulation, and criteria being emissions reduction, cost impact on business, incentive to innovate, and public support. Or the PACED model could be used to lead a discussion on the minimum wage, with options of keeping the current Federal minimum wage (\$7.25), raising the minimum to \$15 over five years, or increasing to \$15 immediately, and criteria being poverty reduction, employment levels, and business cost. It's important to have a discussion with students on finding the right criteria by which to assess a policy. That is, the criteria that aligns with the goals of the policy.

In Macroeconomics, students could weigh the alternatives the FOMC faces every meeting regarding the policy decision around setting the target for the federal funds rate: raise the FFR target, leave the FFR target the same, or lower the FFR target with price stability, maximum employment, growth, and financial stability as criteria. In addition, because all criteria are not equal, instructors can weigh some criteria more heavily than others. For example, when using the PACED model to discuss monetary policy decisions, it's important to remember that the Fed has a dual mandate from Congress – the Fed's goal is to promote price stability and maximum employment in the U.S. economy. Other goals such as financial stability and economic growth are important considerations, but they play a secondary role in the Fed's decisions. As such, instructors can weigh these criteria (price stability and maximum employment) by multiplying these scores by 2. In other cases, instructors can use a variety of weights to either emphasize (for example, multiply by 1.5, or 3), or de-emphasize (for example, multiply by 0.5, or 0.8). Although, it's important to remember that some of the attraction to the PACED model is its simplicity – adding too many multipliers adds to sophistication but also adds to the complexity of using it as a decision-making tool.

With the growing popularity of personal finance education in K-12 schools, as well as college campuses, the PACED model provides an easy-to-use tool for applying economic reasoning to personal finance decisions. For example, a scenario asks how a student should spend \$250 they receive as birthday gifts, with alternatives as weekend out with friends, new clothes, save for next semester's textbooks, and pay down credit card debt. The criteria could include enjoyment (utility), financial responsibility, and long-term benefit. Of course, personal finance decisions have a high degree of subjectivity, but the PACED model provides a framework that encourages thinking rationally and quantitatively about how to allocate income.

Reflection

Finally, reflection is an important aspect of the learning process, and, in this case, an effective strategy for ensuring that students are learning key economic concepts along with the decision-making process. For each application, ask the students how that particular scenario demonstrates scarcity, what the opportunity cost of the decision is (which is the alternative with the second highest point total), and identify the trade-offs involved with this decision.

Conclusion

The PACED decision-making model offers more than a step-by-step tool for evaluating choices—it serves as a bridge between foundational economic concepts and real-world application. In the context of a literacy-targeted approach, PACED becomes a powerful instructional strategy that emphasizes depth over breadth, helping students internalize and use core economic ideas like scarcity, opportunity cost, and trade-offs. By centering instruction on decision-making, educators provide students with an authentic entry point into economic reasoning—one that aligns with national content standards and resonates with students' lived experiences. Most importantly, this approach equips students—not just future economists, but all learners—with a durable framework for thinking critically and making informed choices in their personal, professional, and civic lives. When applied intentionally, the PACED model exemplifies what literacy-targeted instruction can achieve: meaningful, lasting economic understanding.

Appendix: Student Activity

PACED Model Example: How Should I Spend \$250?

Scenario: You're a college student who just received \$250 for your birthday. You want to use the money in the best possible way. What should you do?

A – Alternatives:

1. Spend it on a weekend out with friends
2. Buy new clothes
3. Save it for textbooks next semester
4. Use it to pay down credit card debt

C – Criteria:

- Enjoyment
- Financial responsibility
- Long-term benefit

Handout:

Step 1: P—Define the Problem. Why must you make a choice?

Step 2: A—List the Alternatives. What are your possible options?

Step 3: C—Determine the Criteria. What standards are important to you?

Step 4: E—Evaluate the Alternatives. How well does each alternative meet each criterion?

Step 5: D—Make the Decision. Which option has the most favorable trade-offs?

Instruct students to evaluate the alternatives based on their criteria. Explain that they should score the criteria from 1 (lowest) to 3 (highest), based on how well the alternative addresses the criteria. Then, they should add up the scores and enter that sum in the total column for each alternative.

Finally, they should answer the questions below the table. Give students time to work on the activity.

State the Problem: _____

Criteria \ Alternatives	1.	2.	3.	4.
1.				
2.				
3.				
4.				

Results

On a separate paper, write a short reflection addressing the following:

1. Based on the PACED grid, what decision did you make?
2. Based on the PACED decision-making process, why is this decision the best choice?
3. How does this decision demonstrate scarcity?
4. What is the opportunity cost of this decision?
5. What trade-offs are involved in this decision?

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