



The Five Journeys Explained

Project-based to Problem-based to Case-based Learning

From Business Adviser to Employer Partner

1. From Problem Statement to Cases
2. From Defining Solutions to Defining Problems
3. From Opinion to Success Criteria
4. From Solution Presentation to Reflection on Learning

From Business Adviser to Employer Partner

In mapping out any journey, it must begin from a specified location. We begin by assuming the school district and its schools regularly engage with local businesses and industry to receive advice on workforce needs and trends and on the development of curriculum, often through advisory groups and/or the area's workforce development council. For an employer seeking to become more of a partner with a particular school or academy, that journey begins with the development of a deeper understanding of the respective organizations and their operations (business and education) along with their current priorities and issues. Like any partnership, the terms and conditions of a proposed partnership are negotiated between the partners and must be mutually beneficial to both parties. For an employer, growing this partnership provides both context and opportunities for deepening their engagement; for educators, these are the first steps toward enhancing the rigor and relevance of their students' learning experiences. This mutual understanding of how business and education are structured and conducted is seldom achieved through a single meeting or event but rather grows from learning about and visits to both "worlds" and from working together to improve student outcomes.

From Problem Statement to Challenge Case

Ongoing engagement with advisers from business and industry often leads to the use of projects and problems from business and industry in the practice of PBL. A first step in the journey of going further begins with the localization of a challenge within a particular employer who might be seeking more in-depth engagement with a school or academy. Rather than a generalized problem from the business/industry sector, it should be significant to the employer - not necessarily mission-critical but worthy of consideration and exploration. Adding the employer's operational and organizational context further localizes it and adds significantly to its authenticity. In continuing this process of building authenticity and relevance, stakeholders in the solution are identified, as are the nature of their interest, and processes that affect and are affected by the solution to the problem.

Adding "business" context - the significance and ultimately the employer's challenge - provides the final step in this journey. This process of localization and justification is critical for establishing its relevance and providing the background necessary for rigorous problem definition and hypothesis testing in subsequent stages of learning. Having surrounded the problem statement with authentic context, multiple perspectives, criteria for a successful solution, and a business

challenge, the journey to a more fully-developed Case is complete, replacing the practice of providing a problem statement to the students.

From Defining Solutions to Defining Problems

Albert Einstein once wrote: *“If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.”* For students from a world that values quick fixes and easy answers, who expect teachers to tell them what they need to know, this journey is often the hardest. Once presented with a problem, their tendency is to go immediately to thinking about possible solutions. This shift in emphasis and focus on problem exploration is enabled by equipping students with critical thinking and analytical tools that help them explore and better understand the “Why” behind the problem. The transfer of responsibility for coming up with questions about the problem from teacher to students is an important milestone in this journey. Once skilled in techniques for more rigorous thinking about problems and their underlying conditions, the student is better prepared for the final transition: from exploring a problem to defining a problem based on unpacking a Case and exploring its challenge and perspectives.

From Opinion to Success Criteria

With no additional perspectives on the choice of a solution to the problem, the student can only rely on his/her own opinion of success. In such cases, the student presentation becomes one of lobbying for their own opinion versus justification based on other criteria. Arranging interviews with those knowledgeable about the problem and possible solutions is a way to start this journey. Ultimately criteria for success will be captured in building the Case. Besides better mirroring the actual workplace practice of proposing and developing a solution, this perspective on determining success offers more relevance to the learning experience.

From Solution Presentation to Reflection on Learning

This fifth journey entails moving from a final presentation focused on project outputs and student opinion to a summative event focused on the student’s reflection on the learning experience as well as a solution based on an employer's needs and criteria for success. The first step in part of this journey is the inclusion of a summary of the decisions made and the rationale for the proposed solution in the final presentation. This summary can be enhanced by including the perspectives and criteria which aided in selecting a particular solution from among possible alternatives. This parallels the fourth journey from focusing on student opinion to success criteria.

Formative assessments and reflections are important at each stage of Ford NGL Case-based Learning. For students, their addition to the learning experience provides:

- Opportunities for improving and fine-tuning solutions,
- A means for improving future performance, and
- Occasions for identifying and sharing insights.

Summarizing these assessments and reflections, identifying skills and knowledge gained in the course of the experience, and justifying the proposed solution based on business needs and criteria for success then becomes a capstone event in this learning experience.