EXPERIENTIAL LEARNING

What It Is:
- Learning as the process whereby knowledge is created through the transformation of experience.
- A concrete experience forms reflective observations that play a crucial role in the learning process.
- Evaluate the impact of an outside-the-classroom research experience on student learning outcomes, attitudes, and sustainability.

How It Works:
- Integrate a beyond-the-classroom experience with the theories learned in class.
- Hands-on economic research experience involving collecting, analyzing, and presenting data.
- Outside-the-classroom experience through counting cars.
- Findings: higher student evaluations of teaching increased student awareness about environmental issues.

THE PROJECT

Main Topics:
- Economic Education & Teaching
- Experiential Learning
- Sustainable Development
- Pollution, Energy, and Transportation

Procedure:
- Class Discussions and Readings on:
  - U.S. Energy Use
  - Oil Dependency
  - Contribution of the transportation sector to carbon dioxide emissions
  - In-class inquiries of students’ perceptions on local traffic
  - Students summarize articles on energy and externalities:
  - Students work in pairs and count traffic twice during the semester.
  - Students conduct a mid-project reflection assignment.
  - Students make four Facebook video posts while counting traffic and upload traffic count sheets on Dropbox.
  - Students propose a solution to reduce traffic congestion.
  - Students quantify the economic and environmental costs and benefits of their proposed solution.
    - Environmental benefits (reductions in external costs): pollution costs, oil dependency, greenhouse warming costs, congestion costs & the costs of accidents.
    - Delucchi (1998)
  - Students create a 10-minute video project.
  - Students conduct peer reviews.

METHODS

Goal: Explore Lifestyle Changes in the Transportation Sector

- Brainstorm & Integrate Theories
- Research & Observation
- Calculation & Analysis
- Collect Data & Interactive Learning
- Evaluate Learning Outcomes

RESULTS

Ratings from Student Evaluations of Teaching

<table>
<thead>
<tr>
<th>Methods</th>
<th>Fall 2019</th>
<th>Spring 2017</th>
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<tbody>
<tr>
<td>Instructor Performance</td>
<td></td>
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<tr>
<td>Learning &amp; Skill Development</td>
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<td>Instructor Recommendation</td>
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<thead>
<tr>
<th></th>
<th>Traditional vs. Experiential Learning Technique</th>
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<tbody>
<tr>
<td>Overall Instructor Evaluation Score</td>
<td>+6% Student Rating</td>
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<tr>
<td>Consensus in Overall Instructor Ratings</td>
<td>+32% Standard Deviation</td>
</tr>
<tr>
<td>Passion about Environmental Issues</td>
<td>Statistically Significant Increase</td>
</tr>
<tr>
<td>Impact of Lifestyle Changes in Developed Countries on Global Environment</td>
<td>Statistically Significant Increase</td>
</tr>
<tr>
<td>Instructor Performance</td>
<td>+9% Student Rating</td>
</tr>
<tr>
<td>Learning &amp; Skill Development</td>
<td>+9% Student Rating</td>
</tr>
<tr>
<td>Instructor Recommendation</td>
<td>+19% More Likely to Recommend</td>
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</tbody>
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BENEFITS

Instructor Benefits:
- Engage in Applied Instructional Techniques
- Evolve with New Teaching Methods
- Flexible Applications in all Levels of Economics Courses
- Cost-Benefit Analysis
- Interdisciplinary Teaching Methods
- Connect Students with Real-life Experiences
- Better Student Evaluation Results & Learning Outcomes
- Outside-the-Classroom Engagement with Students
- Perceived as an Approachable Instructor

Student Benefits:
- Research Experience and Data Collection Exposure
- Flexibility with Research Techniques
- Engagement with Real-life Situations
- Builds Commitment, Responsibility, and Creativity
- Fosters Cooperation and Leadership
- Application of Social Problems & Environmental Challenges
- Exposure to the Transportation Sector & Externalities
- Fosters Critical Thinking Skills
- Builds Fundamental Skills for Future Career
- Problem Solving Ability while Tackling Complex Issues
- Increases exposure to Interdisciplinary Studies
- Making a Connection between Personal Choices & Environmental Issues
- Rethinking Lifestyle Choices for the Greater Good
- Increases Student Motivation, Retention, and Depth of Understanding

Societal Benefits:
- Increases Awareness of Societal Issues
- Teaching Innovation Method
- Better Learning Outcomes
- Builds a Stronger Student-Instructor and Student-to-Student Bond
- Promotes Better Understanding of the Public Sector
- Creates New Knowledge & Ideas
- Stimulates Innovation & Critical Thinking Skills
- Encourages Greener Lifestyles
- Inspires Careers & Future Research in Related Fields
- Applied Research Skills Create more Capable Employees for the Labor Force

CONTACT INFORMATION

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