



Starting Point: Pedagogical Resources for Teaching and Learning Economics

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How did Starting Point get Started?

- Earlier work by Simkins and Maier
 - Focused on adapting innovations across disciplines

arXiv.org > physics > arXiv:0807.3534

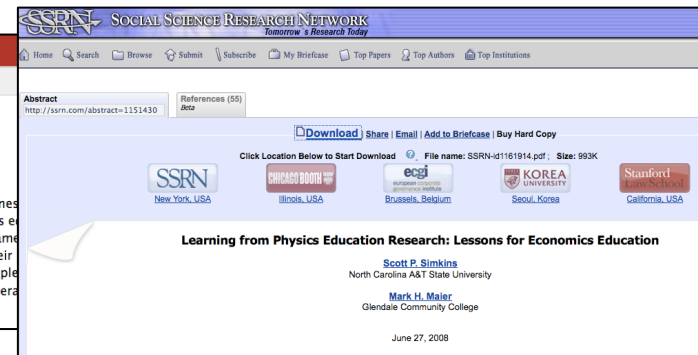
Physics > Physics Education

Learning from Physics Education Research: Lessons for Economics Education

Scott P. Simkins, Mark H. Maier

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We believe that economists have much to learn from educational research practices and related pedagogical innovations in other disciplines particular physics education. In this paper we identify three key features of physics education research that distinguish it from economics education research – (1) the intentional grounding of physics education research in learning science principles, (2) a shared conceptual research frame focused on how students learn physics concepts, and (3) a cumulative process of knowledge-building in the discipline – and describe their new teaching pedagogies, instructional activities, and curricular design in physics education. In addition, we highlight four specific examples of successful pedagogical innovations drawn from physics education – context-rich problems, concept tests, just-in-time teaching, and interactive demonstrations – and illustrate how these practices can be adapted for economic education.



- Need for readily accessible, easy-to-use set of resources

What is Starting Point?

An economic pedagogic portal that seeks to:

- ***Introduce economists*** to innovative teaching strategies – within and beyond the disciplines
- ***Provide tools*** to integrate and assess research-based teaching strategies in classroom settings
- ***Promote sharing*** of teaching innovations and examples implementing these innovations



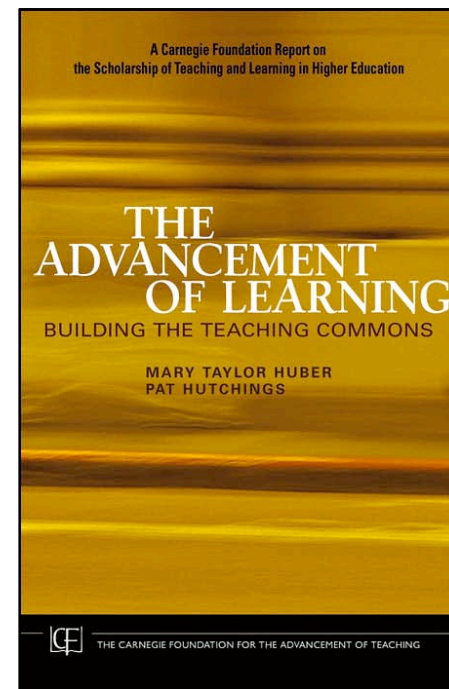
What is Starting Point?

Pedagogic Modules under development (16):

- Context-Rich Problems
- Just-in-Time Teaching
- Quantitative Writing
- Teaching with Cases
- Cooperative Learning
- Classroom Experiments
- Teaching with Computer Simulations
- Effective use of Personal Response Systems
- Interactive Demonstrations
- Undergraduate Research
- Interdisciplinary Approaches to Teaching
- Service Learning
- Spreadsheets Across the Curriculum
- Documented Problem Solving
- Using Media to Enhance Teaching and Learning
- Interactive Lectures

Why use Starting Point?

- Central location for comprehensive set of pedagogical resources
- Promoting the concept of a “teaching commons”



How can Instructors use Starting Point?

- Learning about specific pedagogic techniques
- Browsing the teaching examples library

Teaching Methods

Each pedagogic approach is described succinctly so you can quickly understand how the technique might be used in your classroom. By fellow educators, these descriptions include tips for effectively using each technique, related research, and a set of example activities.

This list is by no means comprehensive. It reflects the interests and priorities of the partners and projects that have contributed to this list. If you'd like to contribute to the library and help this list grow we'd love to [hear from you](#).

- [Assessment](#) provides educators with a better understanding of what students are learning and the process of learning content. Compiled by: William Slattery at Departments of Geological Engineering and Earth Sciences, Wright State University, Dayton, Ohio.
- [Calibrated Peer Review™ \(CPR\)](#) is a web-based management tool that enables discipline-based classes of any size.
- [Campus-Based Learning](#) uses the campus environment itself as a teaching tool. Compiled by: Carleton College.
- [ConceptTests](#) are conceptual multiple-choice questions that focus on one key concept of an in-class lesson. When coupled with student interaction through peer instruction, ConceptTests represent an assessment of student understanding. Compiled by: David McConnell, North Carolina State University.
- [Cooperative Learning](#) involves students working in groups to accomplish learning goals. Compiled by: Rebecca Teed (SERC), John McDaris (SERC), and Cary Roseth (UMN).

Cooperative Exercises and Examples

There are lots of ways to use cooperative learning in your classroom. These links will take you to other areas of the Starting Point site with resources that can be adapted using the techniques of cooperative learning.

- [Indoor Labs](#): especially if a written report is involved
- [Outdoor Labs](#): again, especially if they do a written report
- [Independent Research Projects](#): works well with [jigsawing](#), can involve [data or models](#)
- [Peer Review](#): works well with pairs
- [Interactive Cases](#): these open-ended investigations require cooperation
- [Team Games](#): you'll want to add individual accountability
- [Interactive Role-Playing](#): scenarios and roles can be written to ensure that all students are part of cooperative teams
- [Reviewing journal articles](#): You may want to create interdependence by assigning several articles and give different ones to different group members.
- [Studio Courses](#): Traditional courses can be reorganized into a more student-centered model (see also [Williamson and Rowe, 2002](#) and [Savarese, 1988](#)).



What's Different about Starting Point?

- Central location for resources
- Extensive pedagogic topic coverage
- Developed in interdisciplinary teams
- Intentionally adapting innovations across disciplines
- Dynamic library of examples
- Content management system framework (modular and shareable)



Starting Point – An Example

[Starting Point-Teaching Entry Level Geoscience](#) > [Cooperative Learning](#) > [Cooperative Learning in Economics](#)
Explore Teaching Examples

- Active Learning
- Assessment
- Campus-Based Learning
- ConceptTests
- Conceptual Models
- Cooperative Learning**
 - What is Cooperative Learning?
 - Why Use Cooperative Learning?
 - How to Use Cooperative Learning
 - Cooperative Learning Techniques
 - Testimonials and Videos
 - Cooperative Learning in Economics**
 - Identifying and Developing Objectives
 - Content Coverage and Free-Riders
 - Students: Diversity and Learning Styles
 - Economic Assumptions and Controversies

Cooperative Learning in Economics

Original module on economics developed by [link/econ/project/participants/kimmarie_mcgoldrick.html 'KimMarie McGoldrick']
 With assistance from [Jim Cooper](#), [Dan Marburger](#), [Jennifer Rhoads](#), [Karl Smith](#)

In What Economics Courses can Cooperative Learning be Integrated?

Cooperative learning is "one of the most thoroughly researched of all instructional methods" in part because of the many forms it can take (Slavin, 1990: 52). Research suggests that cooperative learning exercises enhance both [academic achievement](#), [motivation for learning](#) and [retention](#). Cooperative learning exercises range from quick and informal (such as the [think-pair-share](#) technique) to encompassing entire class periods with very formal components (such as the [send-a-problem](#) technique). Thus, exercises can be developed for any economics class from introductory to senior experience courses as well as survey, mathematical, and theoretically oriented courses.

The key to developing successful cooperative learning exercises is to recognize that it entails much more than putting students into groups to complete a task. Cooperative learning advocates stress a number of critical components and understanding these components will have a significant impact on the success of any planned exercise.

- [five key elements](#) that suggest cooperative learning is more than just working in groups
- different types of commonly used [group structures](#)
- five key steps for developing and implementing a cooperative learning that guide instructors in [how to use cooperative learning](#)

Choosing the Appropriate Form of Cooperative Learning

Cooperative learning exercises can be loosely categorized by the skill that each enhances including (Barkley, Cross and Major, 2005):

- [discussion](#): learning the language of the discipline
- [reciprocal teaching](#): explaining, providing feedback, understanding alternative perspectives