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Illinois Council of Social Studies



## Teaching Unemployment Across the Curriculum

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This essay is devoted to sharing ideas about the integration of economic concepts into various subjects at the high school level. The goal is to stimulate interest in turning to economic topics when looking for tools to develop critical thinking and informational text analysis skills, as well as to nurture the ability to apply theoretical concepts to real-world problems. The ideas described in this essay were developed and field-tested by teachers who participated in workshops at a not-for-profit institution in Massachusetts during 2014 and 2015. As you will see, teachers showed creativity, flexibility, and passion in the lessons they conducted.

The need for integrating economic concepts into the high school curriculum is well documented, especially after the adoption of Common Core national standards and given the current push for the implementation of those standards. Stepping back from the politically charged discussion about the standards themselves, there is still a need to equip a young generation with the skills and knowledge for success in the global marketplace of the 21st century.

The consensus among economic educators is that knowledge acquisition among high school students is maximized when (1) teachers understand the content; (2) teachers are trained in teaching economics through a well-designed course; and (3) teachers use high quality curriculum materials. The review of the literature showcasing this consensus is presented in the next section. The literature clearly identifies the need for teacher education to improve student learning.

To respond to this demand, a not-for-profit research institute in Massachusetts created the Teach-the-Teachers Initiative (TTI) with two objectives in mind. The first is to help high school teachers gain a deeper understanding of various economics concepts; the second is to demonstrate active engagement as well as other collaborative instructional strategies with the use of nationally proven curriculum materials. Based on the literature on economic education, the institute believes that the achievement of these objectives improves the quality of teaching and thus student learning.

The *Economics-Across-the-Curriculum* approach, which is utilized in this program, encourages the integration of economic concepts into various disciplines. This helps teachers and students experience the beauty of interdisciplinary connections among topics and engage in intellectual inquiry beyond the normal confines of a single-subject area. The program, therefore, appeals not only to economics teachers but also to teachers of English Language Arts, Social Studies, Math,



and Foreign Languages. The participants' diversity generates a cross-pollination of ideas, dynamism, and an interdisciplinary approach to teaching.

### **Research Findings on Teacher Education Programs in Economics**

The literature on the effectiveness of teacher education programs in economics is abundant. The seminal Walstad and Watts (2015) paper presents evidence that teacher education in economics is essential for improving student learning in the subject. It outlines two methods of teacher preparation: (1) pre-service education (during undergraduate studies) and (2) in-service education (courses and workshops for those teachers who are already licensed and teaching). This essay focuses on the second method because the institute is not an academic institution and can only effectively contribute in the area of professional development workshops and other out-of-classroom engagements.

In order to create the most effective, dynamic, and retainable program for teachers, research findings on teacher training programs were reviewed. Swinton, Scafidi, and Woodard (2012) found that the most effective workshops for high school teachers employ a seminar-style delivery of information in the form of in-service training. The Centers for Public Education of the National School Board Association's (Gulamhussein, 2013) report suggests that professional training workshops for teachers should be in the form of active learning where teachers are engaged in making sense of a new concept or practice. Another feature of a successful workshop is substantial duration, to allow time for teachers to learn, process, and ponder the implementation of a new strategy.

The manner of delivery of information to students is very important. If students are engaged in the learning process rather than being mere bystanders, they will retain the information presented to them. Contemporary pedagogy must include active learning, hands-on activities, collaboration, and teamwork. Teachers, therefore, should be able to deliver content in an engaging way. (See for example, Staveley-O'Carroll, 2015; Lantis et al, 2010; Lopus & Hoff, 2009; McGoldrick, 2012). Active learning methods are new to most high school teachers, as most have not been taught this way themselves, have not used technology to the extent their students do, and by and large have not been prepared in these pedagogical approaches (Gulamhussein, 2013). In addition, the pressure of compliance with national and state standards, as well as school district-specific requirements, add to the difficulty of finding time and resources for creative innovation in the classroom.

By utilizing best practices in economics education, the institute was able to create instructional goals, methods, and materials that are flexible and can be customized and adjusted for individualized classroom needs. The presentation of economic concepts is facilitated by the



incorporation of interactive graphics, videos, and experientially based examples and assignments. This interactive pedagogy enhances students' ability to understand the material and retain information.

Using the literature as a basis, the institute decided to contribute to the improvement of teacher training with the goal of infusing economics into various subjects. The Teach-the-Teachers Initiative (TTI) is a multi-day workshop where teachers are trained in both content and pedagogy as a method of integrating economics across the curriculum, engaging students, and improving learning outcomes. Teachers are exposed to active learning techniques and are introduced to performance-based assessment ideas such as authentic projects, demonstrations, digital images, animations, interactive quizzes, video-casts, writing samples, spreadsheets, and others. Teachers leave the workshop with one creative lesson idea in hand and with a plan to field test this idea in their classrooms.

This article shares creative lesson ideas for infusing the concept of unemployment into math, statistics, special education, and English as a Second Language (ESL) classes. These lesson ideas may serve as catalysts for incorporating economics across the high-school curriculum.

### Implemented Lessons about Unemployment

The lessons described here utilize the *Unemployment Survey* lesson in *High School Economics*, 3<sup>rd</sup> edition, published by the Council for Economic Education (CEE) (1). This lesson also can be obtained from the *Virtual Economics* flash drive available through CEE.

The *Unemployment Survey* lesson introduces a nuanced Bureau of Labor Statistics approach to the unemployment rate calculation using a role-play. As participants struggle to decide if stay-at-home mothers or retired accountants are counted as part of the labor force, they start to appreciate the procedural difficulty of data collection and analysis. In addition, by allowing supplementary topics to bolster students' interest in the subject matter, teachers are able to engage the class in substantive discussions and debates as well as to create coherence and linkages between various fields of study. The examples here include math, statistics, special education and ESL/English language learners.

#### *Teaching the Unemployment Rate in Math Class*

In an Honors Algebra class the topic of the day was "Slope, Regression Line, and the Trend." A chalk-and-talk exposition of the mathematical formulae for the derivation of a slope of a linear regression line on a blackboard might be expected. In this class, however, students were shown the Federal Reserve Economic Data (FRED) website, and explored data for their county on



population and the unemployment rate. When students struggled to put both lines on one graph, the teacher used interactive tools on the FRED website to demonstrate how the scale of the vertical axis will affect the graph and how the domain is affected by the selection of various time frames. Students detected and discussed the negative slope of a trend for population, and connected that mathematical concept to their personal observations in their county. In addition, they noticed the shaded areas on the FRED graphs. “These represent recessions,” the teacher clarified. She then explained what recessions are, and students were able to see that the unemployment rate usually increases during recession periods.

The lesson then moved into an active learning exercise on the calculation of the unemployment rate. Students were given pieces of paper stating their “role” in the economy ~ for example: a full-time student, a retiree, a temporarily laid-off factory worker, or a job seeker who had stopped looking for work. Roles also included an employed person, a person actively looking for a job, and a stay-at-home mom. Students had to interview their peers and decide whether the person they interviewed was employed, unemployed, or neither. Based on this information, they were led through the calculation of the unemployment rate appropriate for “their” population. From the point of view of economics, the exercise defined various types of labor market participants and showed special cases of discouraged workers, not-in-labor-force scenarios, part-timers, and retirees. From the point of view of mathematics, the activity built critical thinking and analytical skills, and ability to calculate the percentage and the rate of growth.

As students actively engaged in interviewing each other, discerning the concept of unemployment, and calculating the share of the unemployed in the total labor force, they were able to understand the relationships among these concepts. As the education literature points out, the interdisciplinary as well as active learning approaches are well documented tools for bringing real-life applications to theoretical subjects and for enhancing student knowledge retention.

#### *Teaching Random Sampling in Statistics Class*

Another exciting lesson idea for the *Unemployment Survey* lesson (1) was adapted for an AP Statistics class. This is how it went.

Students first researched how the federal government gathers data to determine the unemployment rate, and they discussed appropriate sampling methods. Then each student received an employment status card (a retiree, a full-time student, a laid-off person, etc.) to role-play during the survey reporting activity. Each student also sampled ten classmates at random, chosen by a computer. This was an attempt to replicate the Bureau of Labor Statistics’ monthly survey method of random digit dialing. Thus, each student had a sample of ten students and was told to record the labor force status of each student in their sample.



After a discussion of the definitions of employed, unemployed, and not in the labor force, each student calculated the unemployment rate for his or her sample by dividing the number of unemployed by the number of people in the labor force, which is the sum of employed and unemployed. So, each student obtained one number to represent the unemployment rate for their sample.

During the class period each student went to the white board and put their unemployment rate statistic on a number line. As a whole, the class created a dot plot of 20 unemployment rates. Of course, each of the 20 unemployment rates was different, and represented a distribution of unemployment rates in 20 possible samples. This result is expected and helped to elucidate the definition of a sampling distribution. The visual interactive instruction made this concept clearly understandable to the students.

The teacher then posed the question: “We have only one true number of the unemployment rate in this population, but we have all these dots here.... Why do you think that is?” The students discussed the concepts of a “range,” a “mean,” and a “standard deviation.” The teacher went on to describe the normal distribution and its properties.

Based on the sampling distribution of the unemployment rate depicted on the board (in this class there were rates that were as low as 17% and as high as 57%), students predicted the unemployment rate for the whole population and then compared this prediction with the actual unemployment rate defined by the teacher for this activity. This helped them to see that, even though there was one true unemployment rate for the population (33%), individual samples can vary markedly. The class discussed the reasons for the “errors” and proposed ways to minimize them, such as using a larger sample.

This creative lesson required students to actively engage with the concepts of unemployment rate and sampling distribution. In addition to employing the inquiry-based method, it fostered the infusion of economic concepts into a statistics class, promoting an interdisciplinary approach to teaching and learning. All of these elements are important for building college- and career-readiness skills among high school students.

#### *Preparing to Teach Unemployment in Special Education and English as a Second Language (ESL) Classes*

The benefit of a high school education in economics is especially challenging to attain for students with learning disabilities (Picard, 2015) or students for whom English is a second language (Greer, 2014). The teacher who implemented the lesson has both types of students in a single classroom. Her students, who require individualized instruction and highly organized



planning, were taught how to calculate the unemployment rate; but before that, they had to learn the vocabulary of economics.

To enhance the students' vocabulary development, the teacher employed a strategy called "Quiz-Trade-Quiz." This approach provides each student with vocabulary and definitions on a sheet of paper. The vocabulary words are obtained from the "Concepts" section of the *Unemployment Survey* lesson (1) and definitions are obtained from the "Procedures" section of the same lesson.

The students move around the room and meet in pairs. They quiz each other on the definitions, giving praise for correct vocabulary responses and identifying the appropriate term if the response is inaccurate. They then trade their lists and seek out a different student to quiz.

Since this procedure provides numerous interactions with several classmates, repetition, and no negative repercussions for incorrect responses, it proved to be an extremely useful tool for the students to learn vocabulary. After this preparation, the students were ready to engage in the interviewing activity of the *Unemployment Survey* lesson (1) for unemployment rate calculation.

## Conclusion

The Teach-the-Teachers Initiative (TTI) program was developed based on evidence about best practices for delivery of economic content to high school teachers, incorporating advanced pedagogy and assessment methods. The approach that is used by the TTI program is called *Economics Across the Curriculum*. It encourages the infusion of economic concepts into various disciplines. The program appeals to a diverse cohort of participants. This diversity generates a cross-pollination of ideas, dynamism, and an interdisciplinary approach to teaching.

The program also allows for the engagement of various types of learners in the discovery of interdisciplinary connections and real-world applications. Through observation of the lessons presented in this essay, it appears that the *Economics-Across-the-Curriculum* approach brings curiosity, enthusiasm, and dynamism to the classroom, for both students and teachers.

After two cycles of the TTI program, the impact on teachers is apparent, as they reported in end-of-course and field-test surveys. Teachers agreed that they are more knowledgeable about the topics and that they learned new pedagogical and assessment methods. Their confidence in incorporating economic concepts into their classes increased. Students who received a lesson from a TTI participating teacher reported that the lesson was interactive, and their understanding of the topic improved.



Overall, the practice of a multi-day workshop where teachers from different disciplines come together to learn economic concepts and contemporary pedagogy and assessment methods is a successful and innovative way to bring economics into the high school curriculum.

## Notes

(1) Anderson et al., 2014: pp. 259-276.





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