

## **ChatGPT and Current Events in the College Classroom: Exploring the use of Generative AI in Economics**

**A. Description of the Project:** To better achieve the goal of active learning and enhance educational outcomes within my International Economics classroom, I designed and implemented an assignment which allowed students to interact with and learn from ChatGPT while studying current events.

**1. Background and Motivation:** International Economics, Economics 430, is an upper-level economics course which addresses economic theories regarding international trade, international trade policy, and international monetary relations. The class serves as a required course for Economics majors and minors but is often populated by Finance and Accounting majors as well as Political Science and Mathematics majors who double major in Economics. I offer one section of this class each academic year and have approximately ten students in the course. The innovation described here was implemented within the last year<sup>1</sup>. My upper-level international economics students inspire me to be better; they are some of Union's best and brightest, so I feel a unique responsibility to not only prepare them adequately for future studies in economics but also to give them an interesting classroom experience. When ChatGPT began making waves in the academic community last year, I took note. Was this the end of the college classroom as we knew it? As I learned more about generative AI technology, I became convinced that it was not going away, and that my students, particularly my upper-level students, would be at a disadvantage if they graduated without some introduction to the use of it in a controlled setting. Furthermore, I realized that using it in the classroom would help facilitate active learning and help students connect what was being discussed in class to current events.

**2. Detailed Explanation of Project:** During the second week of class, students were asked to complete a survey regarding their consumption of current events and their knowledge of ChatGPT. Students were then given a weekly assignment to select one news article related to global economic events. They were advised to select articles with substantial length and directed to employ professional sources such as *The Wall Street Journal* and *The BBC News*. Students were also instructed to choose news stories of major national or international importance and avoid stories about isolated events not dealing with international economics. Another stipulation was that articles were from the current year. Students were directed to read the article, write a brief summary, and explain how the article was related to something learned in class. Then, the students used ChatGPT to complete a series of

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<sup>1</sup> The project spanned February – April 2023. Note that the application for the 2023 Newell Award was the third week in March 2023, thus this project ended *after* the application period for last year's award.

tasks including defining a key word, improving the writing in a student-written paragraph, answering student-created questions based upon the article, and serving as a debate partner for the student. Students submitted a copy of the transcript of their interaction with ChatGPT. Due dates for the assignment were weekly throughout the semester. In class each week the students orally presented a brief overview of their article. A post-test was implemented to assess the effectiveness of the assignment.

**B. How the project differs from current teaching ideas and methods in the field:** International Economics classes are traditionally taught using textbooks provided by national publishers and are typically theory and content heavy. Upper-level classes such as this require class time to be spent on models and their accompanying graphs. Becker<sup>2</sup> (2000) notes that “textbook discussions of markets are too often hypothetical and do not involve current events and observable phenomena”. Karns<sup>3</sup> (2005) provides higher levels of engagement are achieved when students can connect course material to business applications. Within my International Economics course I already employ various methods to make the discipline “come alive” including non-textbook readings, videos, a research paper and presentation assignment, and visits from guest speakers. However, I wanted to place a greater emphasis on current events and better engage the modern student who is constantly employing technology in their everyday life. I decided to try something I had never seen done before by creating an assignment that combined generative AI and current events.

The project is different from current methods in the field because generative AI technology is completely new. Assignments incorporating chatbots are not yet prevalent, therefore I had no template to follow in creating the project. Additionally, my students were similarly unfamiliar with ChatGPT, so the project gave us an opportunity to learn and experience new technology together. Current events assignments typically involve reading an article and summarizing the major findings and linking them to class content; the project outlined here enabled the student to supplement their learning from the article with various forms of investigation, from summarizing to researching related details, to “arguing” with the chatbot about an idea presented in the article. The project had both written and oral elements and aided students in becoming more proficient in the use of chatbots for educational purposes.

The uniqueness of the ChatGPT and current events assignment was affirmed when a case study of my project was published in the June 2023 issue of the *Business Education Innovation Journal*, a peer-reviewed journal indexed in

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<sup>2</sup> Becker, W. E. (2000). Teaching economics in the 21st century. *Journal of Economic Perspectives*, 14(1), 109-119.

<sup>3</sup> Karns, G. L. (2005). An update of marketing student perceptions of learning activities: Structure, preferences, and effectiveness. *Journal of Marketing Education*, 27 (2), 163-171.

EbscoHost and Cabells. The article “ChatGPT and Current Events in the Economics Classroom” contributed to the literature by providing the first example of an assignment combining active learning, current events, economics, and the use of ChatGPT. I also presented this work at an academic conference and at the Union Faculty Workshop.

**C. Your opinion of the success of the project and how it can be improved:** The ChatGPT and Current Events assignment provided depth and variety to the International Economics class, which can suffer from an overemphasis on theory without a focused attempt to include more variety and low stakes applications of the material. Implementing current events in the course along with generative AI gave students a greater appreciation for how theory can come to life in the context of the global economy. The project succeeded in introducing students to the use of generative AI; for most students, it was their first experience with ChatGPT.

Students responded well to the assignment and their post-test comments provided interesting feedback. 78% of students stated that their ability to ask ChatGPT meaningful questions improved over the course of the assignment. 44% stated that they would use ChatGPT to understand current events in the future with 55% stating that they felt more confident using ChatGPT. 33% found an increased ability to understand the articles they read by interacting with ChatGPT. The table on page 5 shows the pre-test and post-test summary statistics and the results of paired t-tests. The comparison of the pre and post-test indicated some significant changes in student behaviors and thoughts regarding current events. Students were marginally significantly more likely to consume current events, which was to be expected since they were now incentivized to do so. A significantly larger portion of their current events consumption was focused on international events, which is again logical since the course focused on international economics. Another significantly different response ( $p < 0.05$ ) from the pre-test to the post-test was related to student attitudes towards the proposed ban on ChatGPT at college campuses. In the pre-test, seven students were neutral towards a ban, while one was opposed and one was in favor. In the post-test, five students answered that they were opposed to a ban on ChatGPT on college campuses, while four were neutral. The assignment was successful in convincing some students that ChatGPT was useful and worthy of access for college students.

Table 2 outlines the post-test results for survey questions related to the student perceptions of the assignment and their learning. When asked about the assignment as a whole, students felt that the assignment was a good learning experience with a mean rating of 5.89 (std. deviation of 1.05) which was significantly higher than the scale midpoint of four,  $t(8)$ ,  $p < 0.001$ . Students also said that they felt more aware of current events impacting the international economic environment as a result of the assignment with a mean rating of 6.11 (std. deviation of 0.60) which was

significantly higher than the scale midpoint of four,  $t(8)$ ,  $p<0.001$ . When asked if they would recommend the assignment for future semesters on a scale of 0 (not at all likely) to 10 (extremely likely), the mean rating was 7.33 (std. deviation of 1.87) which was significantly higher than the scale midpoint of 5.5,  $t(8)$ ,  $p<0.02$ .

The assignment could be modified or improved in various ways. For instance, the assignment could also require an element in which the student evaluates the responses of ChatGPT and determines if any factually incorrect information was provided. The short oral presentations could be expanded to more in-depth presentations in which students are required to respond to their peers. Since this assignment was created, Cowen and Tabarrok<sup>4</sup> (2023) have provided a list of ways to improve the prompts provided to ChatGPT including to provide specific keywords and lots of detail, ask the chatbot for intelligence and expertise, ask for answers in the voice of various experts, ask for compare and contrast, have it make lists, ask lots of sequential questions on a particular topic, ask for summaries, ask it to vary the mode of presentation, and ask it to generate new ideas and hypotheses. Given this advice, the ChatGPT and Current Events assignment could be modified as follows: 1) Rather than asking ChatGPT to simply define a word or term, instead ask the chatbot to provide a detailed explanation of the meaning and context of the word or term for a particular country or time period. 2) Rather than simply asking ChatGPT various questions, direct ChatGPT to answer in the voice of a well-known economist or in the voice of a particular school of economic thought. 3) In addition to asking ChatGPT to serve as a debate partner, ask the chatbot to compare and contrast two concepts from the article. 4) Direct students to ask for an explanation of a particular topic suitable for a high school freshman and for an explanation of that same topic suitable for a college graduate. I would also recommend that students ask more detailed intelligent questions themselves to gain better responses from ChatGPT.

**Table 1: Pre-Test and Post-Test Summary Statistics and T-Tests**

	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Significance</b>
How often do you consume information on current events? (1=Less than once a week, 2=Once a week, 3=few times a week, 4=Daily)	2.11 (1.10)	2.78* (0.67)	Significant
How important is it for a business student to monitor the external current events environment, especially international economics? (1= Not important, 5=Extremely important)	3.44 (0.88)	3.56 (0.73)	Not Significant
How important is staying informed about current events to you? (1 = Not at all important, 5 = Extremely important)	2.89 (0.78)	3.11 (0.93)	Not Significant
How likely are you to seek out multiple perspectives on a current event? (1 Extremely unlikely, 5 = Extremely likely)	3.44 (1.01)	3.44 (1.01)	Not Significant
What % of your current event studies are devoted to international events? (1=less than 10%, 25%, 50%, 75%, more than 75%)	1.67 (0.67)	2.56* (1.13)	Significant
How do you feel about the proposed ban on ChatGPT on college campuses? (1=Strongly opposed, 5 = Strongly in Favor)	3.00 (0.47)	2.44** (0.50)	Significant

\*\*Indicates significance at the 5% level, \*\*\* Indicates significance at the 10% level

<sup>4</sup> Cowen, Tyler and Tabarrok, Alexander T., How to Learn and Teach Economics with Large Language Models, Including GPT (March 17, 2023). Available at SSRN: <https://ssrn.com/abstract=4391863> or <http://dx.doi.org/10.2139/ssrn.4391863>

**Table 2: Post-Test Summary Statistics and T-Test Comparison to Likert-Scale Mean**

	Post-Test
Overall, I would rate the ChatGPT Current Events Assignment as a good learning experience. (1= Strongly Disagree, 7 = Strongly Agree)	5.89*** (1.05)
As a result of the ChatGPT assignment, I feel more aware of current events impacting the international economic environment. (1= Strongly Disagree, 7 = Strongly Agree)	6.11*** (0.06)
How likely is it that you would recommend the Current Events with ChatGPT assignment be given in future semesters of this class? (Not at all likely = 0; Extremely likely = 10)	7.33** (1.87)

\*\*\*Indicates significance at the 1% level, \*\* Indicates significance at the 5% level

### ChatGPT and Current Events in the Economics Classroom

#### ABSTRACT

This paper discusses the effectiveness of using generative AI technology, specifically ChatGPT, to cover current events in the International Economics classroom. The author outlines an assignment designed to provide students with the opportunity to interact with and learn from ChatGPT. The use of AI technology can improve student learning, engagement, and critical thinking by helping students connect theory to real-world applications. Upon completion of the assignment, students reported a greater awareness of current events impacting the international economic environment, an increased ability to interact in meaningful ways with the chatbot, and a greater understanding of the benefits and limitations of ChatGPT. Students were also significantly more likely to oppose a ban on ChatGPT in college classes. Despite the concerns educators have about large language models like ChatGPT, the author suggests that faculty can add new dimensions to their teaching practices by implementing generative AI technology in their courses.

**Keywords:** ChatGPT, artificial intelligence, generative AI, education, pedagogy, current events

#### INTRODUCTION

What has the potential to disrupt academia while simultaneously offering the academy a chance to gain efficiency and embrace innovation? ChatGPT, the public tool based on the GPT (Generative Pre-trained Transformer) language model technology developed by OpenAI. The chatbot can accept text-based requests and then answer questions, complete tasks, and participate in discussions all while producing responses with human-like language. Just how does ChatGPT work? If you ask the chatbot, it answers with the following: "ChatGPT uses a deep neural network with millions of parameters to analyze and generate natural language text. To create ChatGPT, OpenAI trained the model on a large corpus of text data using a technique called unsupervised learning. This means that the model was trained to learn patterns and relationships in the data without explicit guidance or labeling from humans. Once the model is trained, it can generate text in response to a given prompt or question" (By ChatGPT March 21, 2023).

In short, ChatGPT is a search engine with a human voice that can craft an essay, generate survey questions, explain Shakespearean sonnets, discuss ancient texts, and write a song about calculus in the style of Michael Jackson. How should academia approach this innovation which could disrupt the traditional classroom setting as students flock to ask ChatGPT to answer their homework questions and write their essays? The academy can either fight against or embrace the new technology.

The purpose of this article is to encourage educational professionals to embrace the innovation that is ChatGPT and leverage it within their classrooms to provide opportunities for greater learning. This article outlines an assignment designed to provide students an opportunity to interact with and learn from ChatGPT while studying current events in an International Economics class. First, the background and justification for using ChatGPT within the classroom and particularly applied to study economics and current events is discussed. Then the methods, instructions, and examples of submissions are provided. The author includes evidence of student evaluation of the assignment, and the article concludes with recommendations and potential assignment modifications for educators who choose to adopt the use of ChatGPT within their classrooms.

#### LITERATURE REVIEW

The use of artificial intelligence in education is nothing new. Chen, et al. (2020) provides a review of the literature on the impact of AI on education, finding that artificial intelligence "initially took the form of computer and computer related technologies, transitioning to web-based and online intelligent education systems, and ultimately with the use of embedded computer systems, together with other technologies, the use of humanoid robots and web-based chatbots to perform instructors' duties and functions independently or with instructors."

Although ChatGPT is a new technology, researchers are already beginning to consider the implications of the technology for the classroom. Adiguzel, et al. (2023) offers a comprehensive overview of AI technologies, their

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"ChatGPT and Current Events in the Economics Classroom" was published in the June 2023 issue of the *Business Education Innovation Journal* and was the result of the innovation described in this application.

While the assignment was still ongoing, I presented my preliminary thoughts on how to leverage ChatGPT to evaluate current events in the economics classroom at the 2023 Society of Business, Industry, and Economics Annual Conference. The attendees had some helpful comments. It was an interesting discussion given that AI technology was so new at the time of the conference.



### 2023 Fall Faculty Workshop August 16, 2023 8:00 a.m. -12:00 noon Carl Grant Events Center

8:00 – 8:30 a.m. Continental Breakfast

8:30 – 9:00 a.m. Welcome  
Session 1: *Technological Challenges to Christian Higher Education*  
Jacob Shater

9:00 - 9:45 a.m. Session 2: *Panel on AI and Higher Education*

9:45 – 10:00 a.m. Special Presentation

10:00 a.m. Break

10:15 a.m. Concurrent Breakout Sessions

As a result of this classroom innovation, I was invited to serve on a panel discussing AI and Higher Education at the Fall 2023 Union Faculty Workshop.

### SOBIE 2023

Wednesday, April 12

9:00 – 10:15 am  
Session 4: Economics  
Terrace 1  
Chair:

Going Back to the Future: A Look at Why Inflation is so High & Comparing 1980 to 2022  
Jeff Johnson, Athens State University  
Kim Bell, Athens State University

SBA Lending in Tennessee: A Strategy for Economic Growth  
Dennis Pearson, Austin Peay State University  
Amye Melton, Austin Peay State University  
Liz Snodgrass, Tennessee Small Business Development Center  
Matt Pankey, Austin Peay State University (Student)

Chat GPT and Current Events in the Economics Classroom

Session 5: Round Table

Terrace 2  
Topic: *The Implications of Incorporating RSI into Undergraduate Online Micro and Macroeconomics Courses*

Moderator/Facilitator: Lane Boyte-Eckis, Troy University  
Based on work by Lane Boyte-Eckis, Troy University  
Steven Lee, California State Polytechnic University Pomona  
Anand Krishnamoorthy, Troy University