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# Diversifying the use of pop culture in the classroom: Using K-pop to teach principles of economics

Jadrian J. Wooten<sup>a,\*</sup>, Wayne Geerling<sup>b</sup>, Angelito Calma<sup>c</sup>

<sup>a</sup> Department of Economics, 315 Kern Graduate Building, Penn State University, United States

<sup>b</sup> Department of Economics, Room E970, Monash University, VIC, 3800, Australia

<sup>c</sup> Faculty of Business and Economics, 111 Barry St, The University of Melbourne, VIC, 3053, Australia

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## ABSTRACT

Economic educators have been teaching with pop culture for decades, but no primary work has identified media from foreign-language sources. We provide three teaching guides that capitalize on the growth of Korean popular music and can be integrated into the principles curriculum. The three artists chosen – BTS, BLACKPINK and EXO-CBX – have huge global followings. Each online music video provides English subtitles and economic content. We provide summaries and discussion questions for educators wishing to use the music videos in their classroom.

## 1. Introduction

Streaming and digital technologies have changed the way people around the world listen to music. While countries and cultures traditionally developed a cultural identity around regional genres, the music was largely consumed by only those in the country. Streaming services, which allow listeners to access nearly the entire catalog of worldwide music, have broken the barrier that kept music genres isolated from each other (Ferreira and Waldfogel, 2013). The different genres of music that people listen to are rapidly converging and will likely look more homogeneous than it does today with more music produced by international stars (Krueger, 2019).

Similar to international trade patterns in other markets, music exhibits a strong “home bias” from consumers), but the most played music appears to be converging to songs produced from international musicians rather than a single dominant genre produced in a single country. Some of the home bias can be explained by language differences, particularly when the language is exclusive to that country, but this bias has been eroding since 2004 when Apple launched the Apple iTunes store. This reduction in home bias has resulted in a more level playing field for popular music. The share of popular music attributed to past superstars is shrinking, and the music world has grown smaller due in part to streaming services (Krueger, 2019).

While there has been significant growth in the music industry, particularly in international genres,<sup>1</sup> there has been no corresponding increase in the use of international pop culture to teach economics. Current teaching resources are predominantly centered around media produced in the United States and the United Kingdom. The music industry is converging, due in part to a reduction in

\* Corresponding author.

E-mail addresses: [jw27@psu.edu](mailto:jw27@psu.edu) (J.J. Wooten), [wayne.geerling@monash.edu](mailto:wayne.geerling@monash.edu) (W. Geerling), [calmaa@unimelb.edu.au](mailto:calmaa@unimelb.edu.au) (A. Calma).

<sup>1</sup> The world’s largest streaming service, Spotify, noted that “Modern Bollywood” was the breakout genre for 2019 and took time to highlight the growth of K-pop’s most popular band, BTS.

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“trade frictions” that has made it easier for listeners to consume international music. The liberalization of music, however, has not resulted in an increase in the number of teaching resources available for economics educators.

The purpose of this paper is to provide teaching guides for faculty wishing to diversify their pop culture use in the classroom. While there has been a big push in using media in the classroom to engage students (Picault, 2019; Wooten et al., 2020a,b), no previous work has focused on providing educators with tangible resources that may engage underrepresented groups. Advocates (Al-Bahrani, 2020; Bayer and Rouse, 2016) have called for educators to focus on creating and implementing more diverse teaching methods, particularly at the principles level. By updating the material used to teach economics, women and underrepresented minorities may be less likely to report that their courses are irrelevant or that they don’t belong (Bayer et al., 2020).

We provide three teaching guides based on three of the most popular Korean Pop (K-pop) bands from the past few years. For each artist, we provide instructors with an edited music video that includes English subtitles and economic commentary. Each guide includes a summary of the song and a key lyric that highlights the economic concepts in the lesson. These videos are hosted on the Music 4 Econ website (Geerling et al., 2020).<sup>2</sup> A warm up activity and assessment questions are included with each guide. The lessons are designed as a formative assessment for that particular lesson and range in length from 10–20 min. The Methodology section highlights how the lessons were implemented in the course during the Fall 2020 semester, but also provides alternative delivery methods depending on the class structure. A post-semester survey was sent to students following the conclusion of the course to gauge their perception of K-Pop as a teaching tool. We present the results of this survey in the Appendix.

## 2. Literature review

The importance of using music to teach economics is well documented and goes back to the early 2000s. Much of the focus has been on using popular music to convey economics concepts (Van Horn and Van Horn, 2013; Mateer et al., 2016), but others have tried to present a wide range of music that could appeal to diverse audiences (Tinari and Khandke, 2000; Hall and Lawson, 2008; Hall et al., 2008; Lawson et al., 2008; McClough and Heinfeldt, 2012). More recent researchers have dug deeper into specific genres of music to identify a wide variety of songs that can be used across the curriculum, but have focused on either country music (Melichar, 2018) or Broadway musicals (Rousu, 2016). We take the more genre-specific approach by looking at K-pop.

While there has been significant growth in the number of resources available to teach economics, its impact on learning has been less of a focus. Previous work has focused on learning outcomes and the use of music in the classroom and has found that music has the ability to improve student learning for some students (Harter, 2003) so long as the song choice is very specific to the economic content being assessed (McClough and Heinfeldt, 2012). There has been a recent push to have students create music videos based on popular songs, but rewritten with economics themes (Holder et al., 2015; Al-Bahrani et al., 2017). These projects are often used in place of a final exam and serve as a summative assessment for the course. Raehsler (2013) has found that incorporating music projects has a positive impact on attendance and the overall evaluation of the course, but when students are asked to write their own lyrics grades also improve.

While not specifically addressed in this particular line of research, the outcomes previous researchers have found likely stem from the learning science literature on scaffolding. Cognitive psychologists have formalized that students can see significant learning gains when educators take advantage of an existing structure of knowledge that students possess. By establishing a common framework (music) among students, educators can focus their teaching efforts on more complex topics (Van de Pol et al., 2010). Specialists in instructional design (Sickel, 2019) have begun to take a multidisciplinary approach to examining the best ways for educators to use media as the foundation for learning.

While the use of English-language pop culture to teach economics is becoming more prevalent in Western societies, academic studies of how K-pop can be used in teaching are uncommon. Kim (2017) had students decode K-Pop lyrics and magazine articles to apply their own interpretation to the songs before sharing their results with others. They detail the importance of teaching with K-pop and how K-pop can be an effective resource for students. Lee (2018) used K-pop music videos to teach students a variety of Chinese idioms, which demonstrates that Korean media can be used outside of Korea. Neither study, however, has a connection with economics education.

Our paper makes two significant contributions to academic literature. First, it extends the genre-specific work of Melichar (2018) and Rousu (2016) to a new genre of music to teach economics. Second, it is the first paper of its kind to demonstrate how instructors can use Korean (or any other foreign language) music to teach an English-based economics course.

## 3. An overview of K-Pop

The South Korean music market has been described as a “power player” in a recent global music report produced by the International Federation of the Phonographic Industry, and the country was recently ranked sixth in music markets worldwide.<sup>3</sup> A full history of the industry is beyond the scope of this paper, but its growth is worth summarizing to show its importance to popular culture more generally. K-pop is now a multi-billion dollar music industry, and groups like BTS and BLACKPINK sell out international concerts within minutes, including venues in the United States and the United Kingdom. BTS is currently ranked second in international music

<sup>2</sup> <https://music4econ.com/>

<sup>3</sup> <https://www.forbes.com/sites/caitlinkelley/2019/04/03/kpop-global-bts-blackpink-grow>

sales, behind Canadian performer Drake.<sup>4</sup> In August 2020, BTS was the first all-South Korean group to reach #1 on the US Billboard's Hot 100 Chart<sup>5</sup> and BLACKPINK was the first K-pop group to play Coachella,<sup>6</sup> the largest music festival in North America. Sales associated with BTS were estimated to contribute close to \$5 billion to South Korea's GDP in 2018 – more than the country's national airline, Korean Airlines (Elberse and Woodham, 2020).

The Korean Wave (*Hallyu* in Korean) is used as a catch-all phrase to describe the increase in global popularity of South Korean culture since the 1990s. While K-pop is a genre of popular music which originated in South Korea, its influences extend to styles and genres of music from across the music landscape. The birth of K-pop can be traced to a 1992 performance on a South Korean television talent show, which opened the door to younger generations of artists. Modern "idol culture" began in the mid-1990s and grew into a subculture that amassed enormous fandom among teenagers and young adults.<sup>7</sup> K-pop became an international music genre in the early 2000s when Korea and Japan jointly hosted the World Cup and a Korean artist, BoA, became the first Korean artist to top the Japanese music charts (Choi, 2014). South Korean culture has grown in prominence and can be seen in everything from Korean dramas on Netflix, skin care products, car manufacturing, and local Korean BBQ restaurants, but the heart of the growth has been music.<sup>8</sup>

Digital music that is now available through global platforms such as YouTube and Spotify has accentuated the growth of K-pop internationally (Kim, 2017). Since 2008, K-pop now extends well beyond an Asian fan base thanks to social media platforms such as Facebook, Twitter, and YouTube. International fans can now view, download, purchase, or stream music from across the globe. The major push of K-pop into the US market came with Psy's parody of South Korean culture in the hit song "Gangnam Style" in 2012. In the five years after its release, the original video was viewed more than 3 billion times and became YouTube's most-viewed video on the platform before being overtaken in 2017.<sup>9</sup> *Hallyu* has been building for two decades, but K-pop in particular has become increasingly visible to global audiences only in the past 10 years. Several K-pop artists have since earned a spot on the Billboard Hot 100 chart, but BTS remains at the apex. "Dynamite", their first song to be sung exclusively in English, debuted at #1 in August 2020 and the band has topped the Billboard 200 main album chart four times.<sup>10</sup>

#### 4. Methodology

The teaching guides below were implemented in a remote course of principles of microeconomics offered synchronously through the Zoom meeting platform. The course was a general elective or core that was taken predominantly by students who would not major in economics. The guides were arranged and stylized similarly to how the instructors use other forms of media in the classroom. Each guide listed below was used as an ungraded formative assessment following a lesson on each particular topic, but assigned before the subsequent lesson. Students were expected to recall concepts from previous lessons in order to answer the warm-up activity and assessment questions.

The questions associated with each teaching guide are designed to allow students time to think of answers on their own initially. If time allows, an instructor may allow students to share their results with nearby students in pairs. This teaching strategy can even be done if classes are large (Buckles et al., 2013) or if classes are held remotely through Zoom (Wooten et al., 2020a,b). Depending on the comfort level of the instructor, students may be invited to share their responses with the class after discussing with a partner. For classes that are delivered asynchronously, students can be instructed to watch the video clips and then provide responses to the questions in a discussion board post.

For each of the guides below, the assigned instructor asked students to write out their responses to the warm up question. Particular students were called on to share their response and a discussion ensued on the appropriate response. Occasionally, a student might offer a different perspective. The video clip was then played in class, but students were instructed to pay careful attention to both the economic content, and the overall meaning of the course. Students were then prompted with the assessment questions, but they were not used as a graded component of the course. With minor adjustments, an instructor could adapt the questions to be answered with classroom response systems. Calhoun and Mateer (2013) summarize the use of classroom response systems coupled with media.

#### 5. Teaching guides

We have selected three songs for this manuscript focused on the popularity of the artist, but also songs that illustrate a range of concepts. Both BTS and BLACKPINK are included in the teaching guides and are currently two of the most popular K-pop bands. A third group, EXO-CBX, is a subgroup of the South Korean-Chinese boy band EXO. They were one of the early K-pop groups who released and performed in Korean, Mandarin, and Japanese.

We have provided three distinct teaching guides which has information about the artists and songs, a list of concepts covered in the video, a warm-up exercise for the topic, and a set of questions that could be assigned as part of an assessment or discussed in class. All of the songs are posted on the Music 4 Econ website ([www.music4econ.com](http://www.music4econ.com)) and are available to download as well. Each music video

<sup>4</sup> <https://www.bbc.co.uk/sounds/play/w3csytfy>

<sup>5</sup> <https://www.billboard.com/articles/business/chart-beat/9442836/bts-dynamite-tops-hot-100-chart>

<sup>6</sup> <https://www.vulture.com/2019/04/coachella-2019-blackpink-set-was-historic-moment-for-k-pop.html>

<sup>7</sup> <https://www.economist.com/asia/2010/01/25/hallyu-yeah>

<sup>8</sup> <https://www.vox.com/culture/2018/2/16/16915672/what-is-kpop-history-explained>

<sup>9</sup> <https://www.vox.com/culture/2018/2/16/16915672/what-is-kpop-history-explained>

<sup>10</sup> <https://www.billboard.com/articles/business/chart-beat/9326042/bts-fourth-no-1-album-map-of-the-soul-7>

includes English subtitles under the music video and economic commentary above the video.

### **Lesson #1: Scarcity, Needs, and Wants**

**Song:** Ka-Ching! (2017)

**Artist:** EXO-CBX

**Length:** 2 min 41 s

**Music video URL:** <https://music4econ.com/home-1/exo-cbx-ka-ching>

**Summary:** As the title would suggest, Ka-Ching! is about money. But even if you had all the money in the world, you would never have enough time to enjoy all the things you want to buy.

**Concepts:** scarcity, wants, needs, tradeoffs, marginal analysis, money, utility

**Learning Outcomes:** Students should understand that the problem of scarcity arises because we have limited resources and unlimited wants, which we often conflate with needs. Money plays an important role in facilitating exchange. We cannot have everything, so we must choose the option which gives us the highest level of marginal utility per dollar.

**Key Lyric:** “Not enough, not enough. Shout out your desires. Let’s enjoy ourselves as much as we can.”

**Warm-Up Activity:** Ask students the following question, and have them record their responses on an index card to share with others in the class: “*If you were trapped on a desert island, what 3 things would you need to survive?*”

Discuss student responses to the prompt and introduce them to the terms **wants**, **needs** and **scarcity**. Once you get beyond water, air, food, clothing and shelter, you are moving into the territory of wants, not needs. Relate this back to the concept of **scarcity**. Because we have seemingly unlimited wants, society needs to find the most efficient way of allocating its scarce resources to best manage this problem.

**Assessment:**

Play the clip link above and ask students to consider the following questions:

- 1 “Ka-Ching” is a song about money, but how does it also illustrate the problem of scarcity?
- 2 How would the absence of money in the modern economy make the market less efficient?
- 3 How do scarcity and prices influence the way a rational consumer may decide to spend their money?

#### **Suggested Answers:**

- 1 Even with an unlimited amount of money, you would not have enough time to do everything you wanted, so you would still need to make trade-offs, that is to decide among competing choices.
- 2 Without money, all transactions would have to be conducted by barter, which involves the direct exchange of one good or service for another (or a double coincidence of wants). Money solves this problem by acting as a medium of exchange to facilitate transactions.
- 3 We have limited resources and the prices of things force us to make tradeoffs between different goods. We cannot afford everything, so want the best bang for our buck subject to income and price constraints. We measure happiness or satisfaction by marginal utility, so a rational consumer would choose the option which offers the highest marginal utility per dollar.

### **Lesson #2: Sunk Costs**

**Song:** Kill This Love (2014)

**Artist:** BLACKPINK

**Length:** 3 min 13 s

**Music video URL:** <https://music4econ.com/home-1/blackpink-kill-this-love>

**Summary:** When is the right time to end a relationship (to “kill this love”) and move on? **Concepts:** sunk costs, decision making, utility

**Learning Outcomes:** Students will be able to better articulate sunk costs and how they should be ignored in the decision-making process. One of the ways people behave. **Key Lyric:** “I need to bring an end to this love.”

**Warm-Up Activity:** Have students read the following scenario and then decide what the person should do next. You may want to have students write on an index card or share with a classmate what they think is the best decision:

*Lisa pays for a ticket to go see the latest movie everyone has been talking about. This theatre has a no-refund policy once the movie starts, but she isn't worried about that since she wants to see the movie. She buys a ticket and sits down to start the show, but 20 min into the movie she realizes it's going to be awful and won't get better. What should she do?*

Have students determine if their decisions are based on *sunk costs* or about *future costs*. They should also consider the benefits of staying or leaving, taking care to focus on *expectations*. Sunk costs should have no bearing on decisions. For example, Lisa cannot get her money back from the theatre, so staying at the movie wastes her time. If there is something she values more than this, she should leave. There is a chance that the movie could turn out **to be** good, but should she risk it?

**Assessment:** Play the clip link above and ask students to consider the following questions:

- 1 What types of decisions do people in relationships commonly make together? What type of decision-making is this usually considered?

- 2 If the relationship isn't going well and one of the people is evaluating that relationship on a day-by-day basis, at what point should they decide to "kill" the relationship?
- 3 What examples might someone give for *not* breaking up with their significant other that an economist would likely consider a sunk cost?

#### Suggested Answers:

- 1 Couples often have to make decisions about where to eat or what activities they want to do. These are typically considered either-or-decisions.
- 2 You should end the relationship whenever the marginal cost is greater than the marginal benefit.
- 3 The most common answer is when people will not end a relationship because of how much time/energy they have already put into the relationship.

#### Lesson #3: Externalities

**Song:** NO (2014)

**Artist:** BTS

**Length:** 4 min 3 s

**Music video URL:** <https://music4econ.com/home-1/bts-no>

**Summary:** The pressure placed on students to get perfect grades and then attend one of South Korea's top 3 universities has a darker side.<sup>11</sup>

**Concepts:** comparative advantage, cost-benefit, negative externalities, positional arms race, positive externalities, zero-sum game

**Learning Outcomes:** Students should understand that the pressure placed on students to get perfect grades and then attend one of South Korea's top universities has a darker side. Suicide, mental fatigue, illness and emigration all impose external costs on South Korean society. This has both short- and long-term impacts on demographics and the labor market. **Key Lyric:** "Who is the one who made us into study machines? It's either number one or a failure."

**Warm-Up Activity:** Ask students to answer the following question and have them list their responses on a notecard: "Why is education important to you?"

Students typically focus on **internal benefits** like getting a better job or making more money. Follow up by having them consider whether society benefits from their decision to obtain more education. Responses typically list social benefits like higher levels of human capital, scientific progress, faster economic growth and higher living standards. Discuss student responses to the prompt and introduce them to the terms: **externality, internal benefits and external benefits.**<sup>12</sup>

#### Assessment:

Play the clip link above and ask students to consider the following questions:

- 1 What do economists mean when they say something "creates an externality"? Does education create a negative or positive externality in this clip?
- 2 What are some of the negative externalities highlighted by BTS in the clip?
- 3 How do these negative externalities impact Korea's demographics and labor market?

#### Suggested Answers

- 1 Remind students that externalities can be positive and negative and that they are imposed on a 3rd party (society in this case). This clip focuses on negative externalities.
- 2 The clip highlights high suicide rates, medical costs associated with students who drop out of school or work, and rent seeking by parents. Korea has the highest youth suicide rate in the world. Many young people cannot cope with the pressure to succeed. Many suffer from fatigue or mental illness and never complete their studies or find a proper job. This imposes huge medical costs on society. Competition to gain entrance into the best universities is so fierce that parents spend a lot of money to ensure their kids get accepted, which leads to widespread bribery and corruption.
- 3 Many Koreans delay marriage and childbirth because of the pressure to prioritize education and a career. Korea's current birth rates are among the lowest in the developed world. The aging population has created acute labor-market shortages and there are macroeconomic concerns in the form of potential declines in productivity and economic decline, a deterioration in fiscal balances, and inadequate welfare.

<sup>11</sup> This particular music video could also be used in an entirely different context from the one presented above. Because the focus is on students' desire for good homes and higher incomes, the video could also be used when discussing human capital and productivity. South Koreans have a significantly higher standard of living compared to the 1950s primarily because of their investment in education. An instructor teaching a principles of macroeconomics course may wish to alter the assessment questions to focus on growth instead of externalities. We thank an anonymous reviewer for this observation.

<sup>12</sup> Depending on an educator's textbook, they may wish to refer to these as private and social benefits rather than internal and external benefits.

## 6. Conclusion

This paper builds on the work of previous educators who have used popular culture, particularly popular music, to teach economics. Our intention is to help economics educators diversify their pop culture resources and mirror trends that are occurring outside of the classroom. Given the increased access our students have to international superstars, the global popularity of K-pop will likely continue to grow.

By editing the music videos to include English subtitles, we allow native English speakers to understand the content of the videos while showing that the study of economics is not limited to the English language. People around the world face the same set of tradeoffs and decisions, regardless of their nationality. We believe that the use of more diverse teaching material shows students the broad impact of the discipline while also engaging students who may not have felt that they would fit into the discipline.

## Appendix A

The lesson guides above were used during a remote learning period because of the COVID-19 pandemic in a principles of microeconomics course delivered through Zoom. The economic concepts covered in the lessons were assessed with exams, but the assessment questions listed in each teaching guide were not used as a formal assessment in the course. We sent a post-semester survey to students to measure student perceptions on the effectiveness of using K-pop as a teaching tool. The survey was sent 3.5 months after the conclusion of the term in an effort to gauge potential long-term impacts of using a non-traditional piece of media in the classroom.

- 1 Compared with other teaching methods, I found it easier to pay attention and learn through the use of K-Pop.
- 2 The use of K-Pop in this course enhanced my learning experience
- 3 The use of K-Pop in this course has enhanced my interest in studying economics.

The results of the survey are presented in Fig. 1. A fair number of students took the time to respond to the survey despite it coming months after the term had ended and toward the end of their summer break. In total 29 students took the survey and 21 left comments when asked “Was there anything in particular about the use of K-pop in this course which you found helpful to your learning experience?”.

Over half of the respondents agreed or strongly agreed that the use of K-pop in the classroom enhanced their learning experience and interest in the subject. Very few students found the material harmful to their learning experience in the class. The open-ended responses confirm the Bayer et al. (2020) results that by incorporating more relatable and personal teaching material, students can feel more engaged and interested in economics. Some of the specific student comments follow, all are the original comments and not edited for spelling or grammar.

- “It was helpful because it does get tiring having to do the same standard questions as well as watching the same lecturer talk for an hour. By having music at the beginning of every lecture and applying the relevant microeconomics content to it was very engaging.”
- “Being able to relate content learnt during the course to the music I enjoy allowed me to understand it from more than one perspective.”
- “University studies sometimes feel mutually exclusive from real life events. The use of K-pop and various pop culture references helped me bridge the theory learnt in class with real life events that I feel engaged in”
- “I’m a huge fan of Kpop, so when I saw something about it on Moodle, it really lit my eyes and heightened my interest in this course (especially when I saw something about BTS, which I’m a big fan of)”
- “I think the use of K-pop give me more interesting explanation and make me understand economic concepts clearly and it brings fun when I learning new economic theory.”

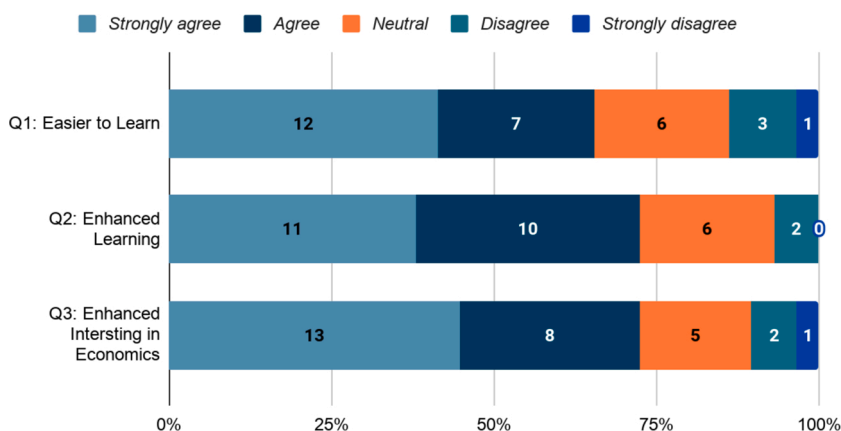


Fig. 1. Student response rate to question related to the use of K-Pop as a teaching too (N = 29).



*“Was definitely something fun, exciting and different to look forward to which broke up the dense reading load that students typically receive in other units!”*

*“I really like the normal class with movies and popular songs. If the K-pop can be added in this course I will also very appropriate.”*

*“I really enjoyed the annotations in the Kpop music videos that explained how the lyrics symbolise economic concepts.”*

*“Demonstrated the prevalence of economic concepts and the catchy nature of the songs assisted in memorisation”*

*“I like the idea of learning economic principles musically, which adds a lot of fun to a boring study.”*

*“Knowledge that it was helping out international students even more!”*

Based on the comments from students, we believe integrating K-Pop into the rotation of popular culture in the classroom had a positive impact on student engagement and interest in the subject. The changes that were made to the traditional delivery of the course were relatively minor in the grand scheme of the entire course.

## References

- Al-Bahrani, A.A., 2020. Classroom management and student interaction interventions: Fostering diversity, inclusion, and belonging in undergraduate economics. SSRN Working Paper #3644803.
- Al-Bahrani, A., Libis, B., Drabik, S., Gibson, J., 2017. Econ beats: a semester long, interdisciplinary, project-based learning assignment. *J. Econ. Finance Educ.* 16 (3), 1–11.
- Bayer, A., Rouse, C.E., 2016. Diversity in the economics profession: A new attack on an old problem. *J. Econ. Perspect.* 30 (4), 221–242.
- Bayer, A., Bhanot, S.P., Bronchetti, E.T., O’Connell, S.A., 2020. Diagnosing the learning environment for diverse students in introductory economics: an analysis of relevance, belonging, and growth mindsets. *AEA Pap. Proc.* 110, 294–298.
- Buckles, S., Hoyt, G., Imazeki, J., 2013. Making the large-enrollment course interactive and engaging. In: Hoyt, G., McGoldrick, K. (Eds.), *International Handbook on Teaching and Learning Economics*. Edward Elgar Publishing.
- Calhoun, J., Mateer, D., 2013. Incorporating media and response systems in the economics classroom. In: Hoyt, G., McGoldrick, K. (Eds.), *International Handbook on Teaching and Learning Economics*. Edward Elgar Publishing.
- Choi, J., 2014. K-pop – The International Rise of the Korean Music Industry. Taylor and Francis, Maliangkay, Roald. Hoboken.
- Elberse, A., Woodham, L., 2020. Big hit entertainment and blockbuster band BTS: K-pop goes global. Harvard Business School Case, 520-125, June 2020.
- Ferreira, F., Waldfoegel, J., 2013. Pop internationalism: Has half a century of world music trade displaced local culture? *Econ. J.* 123 (569), 634–664.
- Geerling, W., Mateer, D., O’Roark, B., 2020. Music then and now: using technology to build a lyric animation module. *Am. Econ.* 65 (2), 264–276.
- Hall, J., Lawson, R., 2008. Using music to teach microeconomics. *Perspect. Econ. Educ. Res.* 4 (1), 23–36.
- Hall, J., Lawson, R., Mateer, D., Rice, A., 2008. Teaching private enterprise through tunes: An abecedarium of music for economists. *J. Private Enterp.* 23 (2), 157–166.
- Harter, C., 2003. Murder versus music: Giving students a choice in introductory economics. *J. Econ. Educ.* 3 (4), 36–55.
- Holder, K., Hoffer, A., Al-Bahrani, A., Lindahl, S., 2015. Rockonomix. *J. Econ. Educ.* 46 (4), 443.
- Kim, A., 2017. Korean Popular Music (K-Pop), Youth Fan Culture, and Art Education Curriculum (Master’s thesis). Available at: <https://scholarcommons.sc.edu/etd/4368>.
- Krueger, A., 2019. *Rockonomics: A Backstage Tour of What the Music Industry Can Teach Us About Economics and Life*. Currency Books, New York.
- Lawson, R., Hall, J., Mateer, D., 2008. From ABBA to Zeppelin, led: using music to teach economics. *J. Econ. Educ.* 39 (1), 107.
- Lee, E., 2018. A study on the effect of creative Chinese characters learning on the ability to learn Chinese old sayings and idioms using K-Pop music video. *Cult. Religious Stud.* 6 (3), 192–203.
- Mateer, D., O’Roark, B., Holder, K., 2016. The 10 greatest films for teaching economics. *Am. Econ.* 61 (2), 204–216.
- McClough, D., Heinfeldt, J., 2012. Assessing the effectiveness of music lyrics in conveying economic concepts. *J. Econ. Econ. Educ. Res.* 13 (2), 55–65.
- Melichar, M., 2018. Economics gone country. *J. Econ. Educ.* 49 (4), 363.
- Picault, J., 2019. The economics instructor’s toolbox. *Int. Rev. Econ. Educ.* 30, 100154.
- Raehsler, R., 2013. The use of popular music to teach introductory economics in a live and online environment. *Int. J. Plur. Econ. Educ.* 4 (1), 78–92.
- Rousu, M., 2016. Broadway economics. *J. Econ. Educ.* 47 (3), 268.
- Sickel, J.L., 2019. The great media debate and TPACK: A multidisciplinary examination of the role of technology in teaching and learning. *J. Res. Technol. Educ.* 51 (2), 152–165.
- Tinari, F., Khandke, K., 2000. From rhythm and blues to Broadway: Using music to teach economics. *J. Econ. Educ.* 31 (3), 253–270.
- Van de Pol, J., Volman, M., Beishuizen, J., 2010. Scaffolding in teacher–student interaction: A decade of research. *Educ. Psychol. Rev.* 22 (3), 271–296.
- Van Horn, R., Van Horn, M., 2013. What would Adam Smith have on his iPod? Uses of music in teaching the history of economic thought. *J. Econ. Educ.* 44 (1), 64–73.
- Wooten, J., Al-Bahrani, A., Holder, K., Patel, D., 2020a. The role of relevance in economics education: a survey. *J. Econ. Educ.* 21 (1), 11–34.
- Wooten, J., Geerling, W., Thomas, N., 2020b. Facilitating student connections and study partners during periods of remote and online learning. *J. Econ. Teach.* 5 (2), 1–14.