Topic 2: Media Marketing and Government Regulating of Self-Driving Cars and Electric Vehicles

Despite impressive advances, the technology does not exist yet to create fully self-driving cars that are capable of responding to all possible driving and weather conditions.

Self-Driving Car image by Julien Tromeur from Pixabay

Meanwhile, in television and online advertisements, automobile

manufacturers are stressing the ease and convenience of letting the car do the driving for you. Using smart technology to implement what Volvo automobile ads call "standard driver assistance features," cars engage in parallel parking, adapt cruise control to match speed to posted speed limits, give blind spot warnings, engage in emergency braking, and take over steering functions in some situations.

Many new cars already have built-in entertainment centers with Internet-connected Infotainment screens available for drivers and passengers (although in late 2021, Tesla announced it was installing a software update to prevent drivers from playing video games while the vehicle is in motion (Tesla to halt games on infotainment screens, *The Boston Globe,* December 24, p. B9).

Even more connectivity is on the way, such as cars communicating directly with stop signs to determine the right of way; cars receiving highway database information to navigate away from traffic jams; cars which wirelessly exchange information with other cars to improve traffic flow; cars with biosensors to adjust in-the-vehicle environment to reduce stress for drivers and passengers ([Fast Forward: The Future of Automobile Technology Is Now](), Your AAA Magazine, Winter, 2021). There are plans to make it possible for cars to stop operating if the vehicle detects a driver has had too much alcohol to drink. What health and safety features would you mandate in self-driving cars and electric vehicles?

Many of these self-driving technologies have been shown to improve traffic safety and save lives in accidents. Left unsaid in the ads, however, is that many drivers can and do disable these features, negating any positive impacts (see [Uber disabled Volvo's safety system before self-driving accident]()), and that split-second, sometimes life-or-death decisions, usually made by humans are being handed over to artificial intelligence (AI) algorithms.
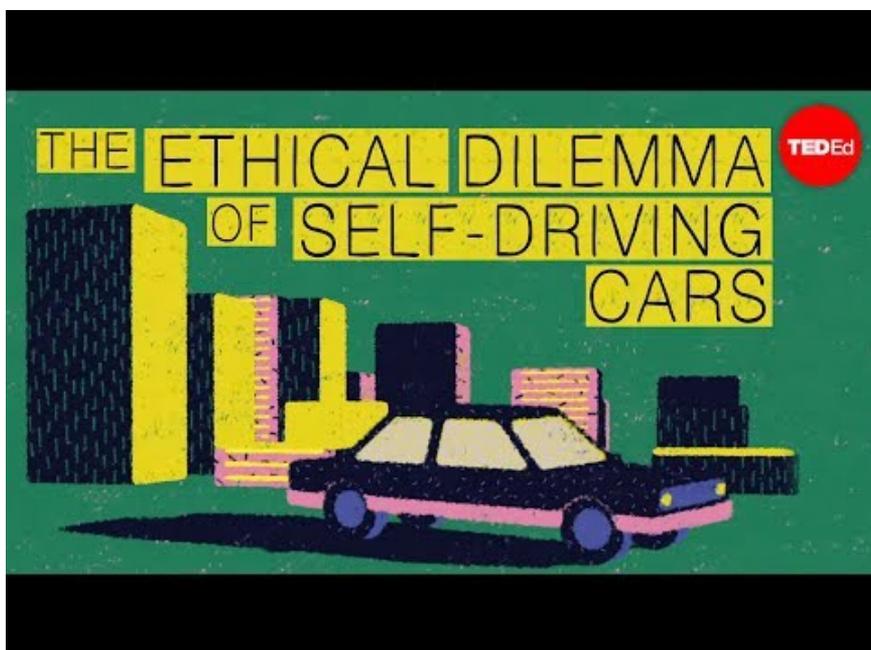
The following activities are drawn from debates over the role and powers of the federal government versus state government that have existed since the Articles of Confederation and the writing of the U.S. Constitution. You will investigate how auto manufacturers are marketing self-driving cars and electric vehicles **and** what local, state, and national governments should be doing to create safer driving for everyone.

Activity: Evaluate Who Should Regulate Self-Driving Cars

1. Research the recommendations and rules regarding self-driving cars (if any) from the [National Highway Traffic Safety Administration](#), the [National Traffic Safety Board](#), and your

local town/city and state governments.

2. Watch ads for new cars on television and/or online and focus on how self-driving and autonomous operation features are promoted in words and visuals. Use the questions on the [Teacher and Student Guide to Analyzing Advertisements](#) document to guide your analysis of the media.

3. Then, consider the following question:
    - Do you think the state government (like under the [Articles of Confederation](#)), the federal government (under the Constitution's federal system), or private companies (as in a competitive marketplace) should take responsibility for regulating self-driving technology?

4. **Design a TV or social media advertisement**, using the techniques you uncovered in step 2, that persuades viewers to understand your point of view regarding who should regulate self-driving technology.

Designing for Learning: Student-Created Activity Example

[Analyzing Self-Driving Cars Ads](#) & [Autonomous Cars Ad](#) by Lydia Jankowski, Suhyun Shin, Emily Inman

Activity: Design an Electric Vehicle Charging Plan for Your Community

While **Electric Vehicles** (EVs) represented only 2% of new car purchases in 2021, the trend is racing rapidly forward. The Biden Administration has a goal of making EVs half of all new vehicle sales by 2030. It is estimated that the country will need 1.25 million public charging outlets by then (there are currently about 150,000 gas stations, although with multiple pumps ([Electric Vehicle Charging](#)

[Infrastructure: Where the U.S. Stands Today](), Bipartisan Policy Center, August 10, 2021).

Currently charging stations are either operated privately by homeowners or available to car owners in parking lots and other spaces where users pay a fee to use them. Such stations are either owned by the business that has the space where the charger is located or that business pays another organization that produces, operates and maintains the charger.

Design a plan to make more charging stations available to drivers in your community.

- How will your plan work economically? Do users pay for the charging service? How will you avoid overcharging or excessive prices? Will charging station operators make a profit in providing this service?
- What role should local, state, or federal government play in the process? How much regulation should government have in the market?

Designing for Learning: Student-Created Activity Example

[Electric Car Charging Station Plan]() by Lydia Jankowski, Suhyun Shin, Emily Inman

Additional resources:

- [Autonomous Vehicles | Self-Driving Vehicles Enacted Legislation]() - National Conference of State Legislatures
- [Regulating Autonomous Vehicles]() - National Conference of State Legislatures
- [The state of self-driving car laws across the U.S.]()

- [The Evolution of In-Car Voice Control](#)

Connecting to the eBook

[Building Democracy for All: How Much Power Should the Federal Government Have in the 21st Century? The Case of Self-Driving Cars and Trucks](#)

Connecting to the Standards

- [Massachusetts Civics & Government Standards](#)
    - *Analyze the weaknesses of the national government under the Articles of Confederation and describe the crucial events (e.g. Shays' Rebellion) leading to the Constitutional Convention* (Massachusetts Curriculum Framework for History and Social Studies) [8.T2.2]
- [ISTE Standards](#)
    - Digital Citizen
        - 2c: Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.
    - Knowledge Constructor
        - 3a: Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
        - 3b: Students evaluate the accuracy, perspective, credibility and relevance of information, media, data, or other resources.
        - 3d: Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

- Creative Communicator
    - 6a: Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
    - 6b: Students create original works or responsibly repurpose or remix digital resources into new creations.
    - 6d: Students publish or present content that customizes the message and medium for the intended audiences.
- [DLCS Standards](#)
    - Ethics and Laws (CAS.b)
    - Interpersonal and Societal Impact (CAS.c)
    - Digital Tools (DTC.a)
    - Collaboration and Communication (DTC.b)
    - Research (DTC.c)
- [English Language Arts > History/Social Studies Common Core Standards](#)
    - CCSS.ELA-LITERACY.RH.6-8.4
    - CCSS.ELA-LITERACY.RH.6-8.6
    - CCSS.ELA-LITERACY.RH.6-8.8
    - CCSS.ELA-LITERACY.RH.9-10.4
    - CCSS.ELA-LITERACY.RH.9-10.6
    - CCSS.ELA-LITERACY.RH.9-10.8
    - CCSS.ELA-LITERACY.RH.9-10.9
    - CCSS.ELA-LITERACY.RH.11-12.4
    - CCSS.ELA-LITERACY.RH.11-12.6
    - CCSS.ELA-LITERACY.RH.11-12.7
    - CCSS.ELA-LITERACY.RH.11-12.8
- [English/Language Arts Common Core Standards](#)
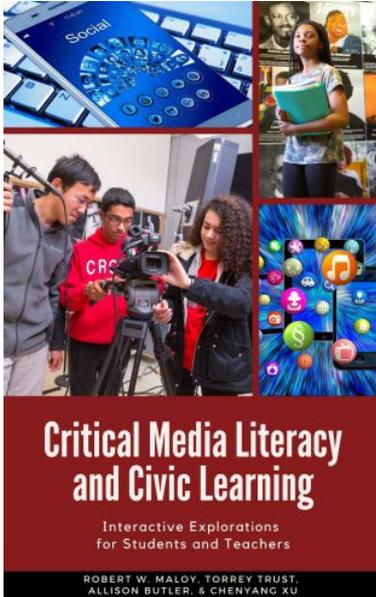
Maloy, R. W., Trust, T., , & Xu, C. (2021). *Critical Media Literacy and Civic Learning.* EdTech Books. https://edtechbooks.org/mediaandciviclearning