

General Education Outcomes – Student Assessment Activity

Report

Spring 2017

Goal: To come up with a voluntary, structured, out-of-class student activity that would give participating faculty an insight into students' grasp of the institutional learning outcomes.

While we had organized a number of GE SLO activities, focused on faculty workshops and creation of rubrics, these were felt to be somewhat unsatisfactory. In-class work does not give a good insight into what students are taking away from the classroom, or whether they're putting together their learning to achieve institutional or general education learning outcomes. An out-of-class activity, therefore, seemed a much better way to gauge student learning.

Preparation:

- Flex activity in January 2017
- Workshop of invited faculty March 6, 2017

METHOD: A group of twelve faculty from different disciplines (English, Ethnic Studies, Nursing, Biology, Sociology, and Chemistry) held a two-hour workshop to create this activity.

- Faculty decided to organize a small group-whole group discussion on climate change;
- The discussion to begin with an assigned article – provocative but not apparently unreasonable;
- Groups to be assigned brief follow-up materials (graphs, short paragraphs), and specific discussion questions touching on different ILOs;
- Faculty created a rubric for assessing the students' discussion.

(Documentation below.)

The activity was scheduled for April 17, 2017. A flyer was sent out to the campus, and a number of students RSVPed.

Activity and Follow-up:

On the day itself, only two of the students who'd responded appeared.

As we did not have a sufficient sample to conduct a meaningful discussion, faculty and the students discussed instead how the activity might be improved. Suggestions:

- **Scheduling:** Look for a time when students are less preoccupied with finals

- Discussion topics: The material was quite dense. The discussion might have proved a bit too challenging, even with the scaffolding. Perhaps a less exam-like format, or a simpler question, might permit students to show more of their skills in a short time.
- Recruitment: Gathering students off the quad is a challenge. Consider embedding an activity as an interdisciplinary unit, a collaboration between classes – students could receive extra credit, or the activity could be embedded into their coursework.

Spring Discussion Forum

Climate Change: A Silver Lining?

Monday, April 17, 2017 2:30 – 4:30
18-206



We're looking for a group of students to participate in a discussion on **climate change**. No grades, no preparation, no homework – just your ideas and responses. **Participants must have completed at least 45 units.**

Refreshments will be served!

On-the-spot gift cards raffle!

If you are interested, please email Madeleine Murphy at murphym@smccd.edu. Places are limited, so please RSVP as soon as possible!

Spring Discussion Forum
Climate Change: A Silver Lining?

Monday, April 17, 2017

2:30 – 4:30

18-206

AGENDA

2:30 Welcome, introductions, and food!

2:45 Presentation

- NASA: “Climate Change: Vital Signs”
- “Kiribati – A Climate Change Reality” (United Nations Development Programme)
- Matt Ridley: “Why climate change is good for the world” (*The Spectator*)
- Freewriting / response (gathering ideas)

3:20 Discussion (four questions)

4:00 Final thoughts / Raffle

WHY CLIMATE CHANGE IS GOOD FOR THE WORLD

Matt Ridley

Don't panic! The scientific consensus is that warmer temperatures do more good than harm.

Climate change has done more good than harm so far and is likely to continue doing so for most of this century. This is not some barmy, right-wing fantasy; it is the consensus of expert opinion. Yet almost nobody seems to know this. Whenever I make the point in public, I am told by those who are paid to insult anybody who departs from climate alarm that I have got it embarrassingly wrong, don't know what I am talking about, must be referring to Britain only, rather than the world as a whole, and so forth.

At first, I thought this was just their usual bluster. But then I realised that they are genuinely unaware. Good news is no news, which is why the mainstream media largely ignores all studies showing net benefits of climate change. And academics have not exactly been keen to push such analysis forward. So here follows, for possibly the first time in history, an entire article in the national press on the net benefits of climate change.

There are many likely effects of climate change: positive and negative, economic and ecological, humanitarian and financial. And if you aggregate them all, the overall effect is positive today — and likely to stay positive until around 2080. That was the conclusion of Professor Richard Tol of Sussex University after he reviewed 14 different studies of the effects of future climate trends.

To be precise, Prof Tol calculated that climate change would be beneficial up to 2.2°C of warming from 2009 (when he wrote his paper). This means approximately 3°C from pre-industrial levels, since about 0.8°C of warming has happened in the last 150 years. The latest estimates of climate sensitivity suggest that such temperatures may not be reached till the end of the century — if at all. The Intergovernmental Panel on Climate Change, whose reports define the consensus, is sticking to older assumptions, however, which would mean net benefits till about 2080. Either way, it's a long way off.

Now Prof Tol has a new paper, published as a chapter in a new book, called *How Much have Global Problems Cost the World?*, which is edited by Bjorn Lomborg, director of the Copenhagen Consensus Centre, and was reviewed by a group of leading economists. In this paper he casts his gaze backwards to the last century. He concludes that climate change did indeed raise human and planetary welfare during the 20th century.

You can choose not to believe the studies Prof Tol has collated. Or you can say the net benefit is small (which it is), you can argue that the benefits have accrued more to rich countries than poor countries (which is true) or you can emphasise that after 2080 climate change would probably do net harm to the world (which may also be true). You can even say you do not trust the models involved (though they have proved more reliable than the temperature models). But what you cannot do is deny that this is the current consensus. If you wish to accept the consensus on temperature models, then you should accept the consensus on economic benefit.

Overall, Prof Tol finds that climate change in the past century improved human welfare. By how much? He calculates by 1.4 per cent of global economic output, rising to 1.5 per cent by 2025. For some people, this means the difference between survival and starvation.

It will still be 1.2 per cent around 2050 and will not turn negative until around 2080. In short, my children will be very old before global warming stops benefiting the world. Note that if the world continues to grow at 3 per cent a year, then the average person will be about nine times as rich in 2080 as she is today. So low-lying Bangladesh will be able to afford the same kind of flood defences that the Dutch have today.

The chief benefits of global warming include: fewer winter deaths; lower energy costs; better agricultural yields; probably fewer droughts; maybe richer biodiversity. It is a little-known fact that winter deaths exceed summer deaths — not just in countries like Britain but also those with very warm summers, including Greece. Both Britain and Greece see mortality rates rise by 18 per cent each winter. Especially cold winters cause a rise in heart failures far greater than the rise in deaths during heatwaves....

The greatest benefit from climate change comes not from temperature change but from carbon dioxide itself. It is not pollution, but the raw material from which plants make carbohydrates and thence proteins and fats. As it is an extremely rare trace gas in the air — less than 0.04 per cent of the air on average — plants struggle to absorb enough of it. On a windless, sunny day, a field of corn can suck half the carbon dioxide out of the air. Commercial greenhouse operators therefore pump carbon dioxide into their greenhouses to raise plant growth rates.

The increase in average carbon dioxide levels over the past century, from 0.03 per cent to 0.04 per cent of the air, has had a measurable impact on plant growth rates. It is responsible for a startling change in the amount of greenery on the planet. As Dr Ranga Myneni of Boston University has documented, using three decades of satellite data, 31 per cent of the global vegetated area of the planet has become greener and just 3 per cent has become less green.... Greening is especially pronounced in dry areas like the Sahel region of Africa, where satellites show a big increase in green vegetation since the 1970s.

It is often argued that global warming will hurt the world's poorest hardest. What is seldom heard is that the decline of famines in the Sahel in recent years is partly due to more rainfall caused by moderate warming and partly due to more carbon dioxide itself: more greenery for goats to eat means more greenery left over for gazelles, so entire ecosystems have benefited....

Well yes, you may argue, but what about all the weather disasters caused by climate change? Entirely mythical — so far. The latest IPCC report is admirably frank about this, reporting 'no significant observed trends in global tropical cyclone frequency over the past century ... lack of evidence and thus low confidence regarding the sign of trend in the magnitude and/or frequency offloads on a global scale ... low confidence in observed trends in small-scale severe weather phenomena such as hail and thunderstorms'.

In fact, the death rate from droughts, floods and storms has dropped by 98 per cent since the 1920s, according to a careful study by the independent scholar Indur Goklany. Not because weather has become less dangerous but because people have gained better protection as they got richer: witness the remarkable success of cyclone warnings in India last week. That's the thing about climate change — we will probably pocket the benefits and mitigate at least some of the harm by adapting. For example, experts now agree that malaria will continue its rapid worldwide decline whatever the climate does.

Yet cherry-picking the bad news remains rife. A remarkable example of this was the IPCC's last report in 2007, which said that global warming would cause 'hundreds of millions of people [to be] exposed to increased water stress' under four different scenarios of future warming. It cited a study, which had also counted numbers of people at reduced risk of water stress — and in each case that number was higher. The IPCC simply omitted the positive numbers.

Why does this matter? Even if climate change does produce slightly more welfare for the next 70 years, why take the risk that it will do great harm thereafter? There is one obvious reason: climate policy is already doing harm. Building wind turbines, growing biofuels and substituting wood for coal in power stations — all policies designed explicitly to fight climate change — have had negligible effects on carbon dioxide emissions. But they have driven people into fuel poverty, made industries uncompetitive, driven up food prices, accelerated the

destruction of forests, killed rare birds of prey, and divided communities. To name just some of the effects. Mr Goklany estimates that globally nearly 200,000 people are dying every year, because we are turning 5 per cent of the world's grain crop into motor fuel instead of food: that pushes people into malnutrition and death.... Britain's climate policies — subsidising windmills, wood-burners, anaerobic digesters, electric vehicles and all the rest — is due to cost us £1.8 trillion over the course of this century. In exchange for that Brobdingnagian sum, we hope to lower the air temperature by about 0.005°C — which will be undetectable by normal thermometers. The accepted consensus among economists is that every £100 spent fighting climate change brings £3 of benefit.

So we are doing real harm now to impede a change that will produce net benefits for 70 years. That's like having radiotherapy because you are feeling too well. I just don't share the certainty of so many in the green establishment that it's worth it. It may be, but it may not.

Matt Ridley, 10/19/2013

The Spectator <http://www.spectator.co.uk/2013/10/carry-on-warming/>

Introduction: Organize your group in the way that you think will best get the discussion going. You will be “sharing out” in a second group for the next part of the discussion, so you may want to make notes!

Hmmm... What do we think?

Ridley wants to make a persuasive case for a different way of looking at climate change. If we look at this as a problem of balancing risks against benefits, and if we think about how to maximize the benefits while minimizing the risks, he believes that climate change is not nearly so terrifying – indeed, it has a silver lining. Writing this article is part of his attempt to convince us of an idea that, in his view, almost never gets discussed.

In fact, he’s not quite so alone in this view of climate change as he says. This point has been made before – not by scientists mostly, but by economists, who are in the business of cost-benefit analysis. Here, for instance, is economist Thomas Gale Moore, making much the same point back in 1998:

If humankind had to choose between a warmer or a cooler climate, we would certainly choose the former. Humans, nearly all other animals, and most plants would be better off with higher temperatures... More people die of the cold than of the heat. More die in the winter than the summer.

But if Ridley isn’t quite alone on this, he’s clearly in the minority. So the burden is on him to put together an argument that clearly lays out his ideas, and shares with us some convincing evidence for at least taking the ideas on board, even if we aren’t persuaded.

Question: What do you think – is Ridley’s argument effective? Does it persuade you, and why or why not? Share and discuss the specific things he says – facts, statistics, interpretations, claims, analogies, examples or illustrations – that stand out to you, either because you find them compelling, or because you don’t. Does his reasoning hold up? Do you think he’d reach a skeptical audience? Share and discuss your views.

Thomas Gale Moore, “Happiness Is A Warm Planet.” The Hoover Institution. 1/30/1998.

<http://www.hoover.org/research/happiness-warm-planet>

What is our global responsibility?

Ridley accepts that climate change will have the strongest impact on poor countries, because they don't have the resources to adapt. In an interview in 2015, he develops this idea, pointing out that "when a hurricane hits a really poor country like Burma, it kills far more people than when it hits a relatively wealthy country like India or Mexico" ("Scientists respond"). So if we really want to help developing populations, he argues, we should be working to "protect people against the weather... we need to be helping them get richer." This way, all societies can do what he argues for in this article: try to "pocket the benefits and mitigate at least some of the harm by adapting."

However, one scientist, commenting on Ridley's interview, said this:

[Ridley's point] is based on one world view which holds that "harm" and "benefit" can be quantified entirely with economics. Another world view would hold that impacts on biodiversity and people's way of life have value in ways which go beyond just money." ("Scientists respond").

In other words, while getting richer might help people adapt to the problems of climate change, there will still be a cost: in the loss of distinctive cultures, and a changing relationship between people and the land they live in.

Question: What do you think? What is the responsibility of wealthy countries towards fragile cultures threatened by climate change? How important is this issue, compared to others (famine, disease control, etc.)? And what is the best way to help poor countries deal with climate change? Consider what Ridley says about the costs and benefits of global warming, and discuss the priorities that make most sense to you.

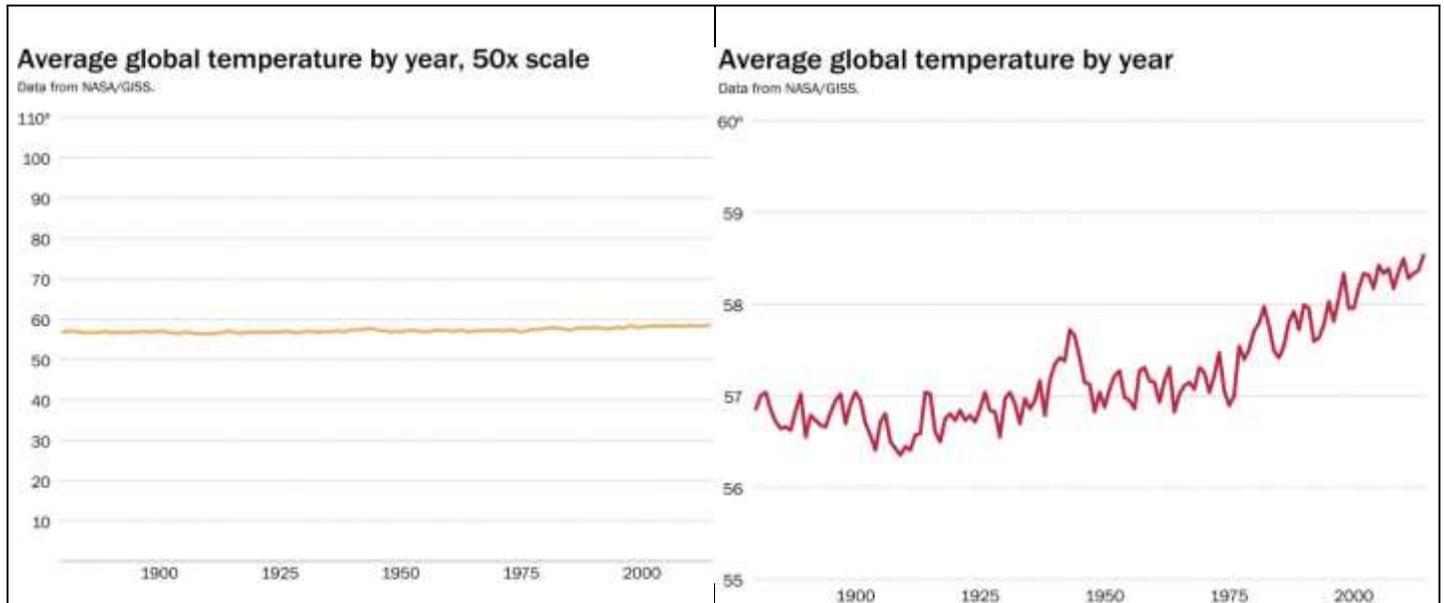
"Scientists respond to Matt Ridley's climate change claims." *Carbon Brief*. 12/7/2015. <https://www.carbonbrief.org/scientists-respond-to-matt-ridleys-climate-change-claims>

What about all those statistical facts?

Ridley grounds much of his argument in statistical evidence, which feels very solid. He cites various studies of natural phenomena (like the greening of the Sahel region), discusses projected temperature increases, and so on.

But here's the thing: this information is available to everyone who studies climate science – and yet most people don't seem to agree with Ridley. In other words, even if these statistics are all correct, they are open to different interpretations. And they can be presented in ways that lead us to very different conclusions.

Here's an example, not from Ridley's article but also relating to climate change, of how the most factual of facts can seem to say different things. Both the graphs below are correct, and tell the same story – but in a very different way. The first graph was tweeted out by the *National Review*, a conservative magazine highly skeptical of climate change; the second is the more familiar graph created by NASA.



Question: How confident are you in Ridley's statistical evidence? Are his interpretations convincing? Why or why not? Which statistics stick out to you, either because they are compelling, or because they are misleading? What questions do you have about some of the evidence? Consider, too, the climate change graph produced by NASA (included in your packet): what light does this shed on Ridley's argument?

Philip Bump, "Why this *National Review* global temperature graph is so misleading." *The Washington Post*. 12/14/2015.
https://www.washingtonpost.com/news/the-fix/wp/2015/12/14/why-the-national-reviews-global-temperature-graph-is-so-misleading/?utm_term=.f869e6023bba

Overall: What should we be talking about?

Ridley is aware that he is making a controversial point. He notes, at the beginning, that no one ever talks about the fact that the climate science evidence, which people use to explain how dangerous climate change is, actually shows that its good effects outweigh the bad ones, and are likely to do so for many years. “Almost nobody seems to know this,” he complains, saying that his ideas are attacked “by those who are paid to insult anybody who departs from climate alarm [with] their usual bluster.” He also blames the media for ignoring the good effects of climate change – they only want to focus on bad stuff, because “good news is no news.”

Most likely, you have formed some responses to Ridley’s argument. You might have noticed factual or logical errors, or you might have been impressed by his argument. You might be nodding in hearty agreement, or you might want to write him a rude email.

Ridley’s tone, and perhaps our responses to his article, illustrate one of the most difficult aspects to climate change discussions: they’re very conflicted. Although we might expect questions of science to rise above politics – we all live on the same planet, and want pretty much the same things (e.g., not to die) – discussions over climate change often end up pitting liberals against conservatives: believers to the left, skeptics to the right. According to one recent poll,

Just over a third of Americans say they care a great deal about climate change. Among them, 72 percent are Democrats and 24 percent are Republicans.... Nearly seven of 10 Democrats believe climate change is mainly a result of human activity; fewer than a quarter of Republicans believe that.

On a separate page, you’ll find a number of other polls reflecting the mixed attitudes we have towards climate change, science, politicians, and policy. It is a complicated and problematic discussion.

Question: Why is this issue not a slam-dunk? Look at some of the Pew polls on public opinion; and think about Ridley’s article, as well as the various things you’ve thought about and discussed in your group: what makes this subject so difficult?

Conclude by making a list of priorities. What can we do, as individuals, to help foster better and more helpful conversation on this subject?

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Spring 2018

Goal: To come up with a voluntary, structured, out-of-class student activity that would give participating faculty an insight into students' grasp of the institutional learning outcomes.

While we had organized a number of GE SLO activities, focused on faculty workshops and creation of rubrics, these were felt to be somewhat unsatisfactory. In-class work does not give a good insight into what students are taking away from the classroom, or whether they're putting together their learning to achieve institutional or general education learning outcomes. An out-of-class activity, therefore, seemed a much better way to gauge student learning.

A previous ILO activity had been cancelled, due to low student participation. To address this, the ILO discussion activity was embedded into two learning communities: the Honors Project students, and students from the Year One Promise.

Preparation:

- Meetings with Allie Fath, coordinator of Year One Promise; Tiffany Zammett, Year One Promise / Dual Enrolment coordinator; and David Laderman, director of the Honors Project - discuss & plan out activity
- With Assessment Committee input, we created a discussion focused on a single topic with multimedia introduction and other materials. Again, the goal was to create questions that would elicit insight on how well students were putting together what they were learning in different classes, to achieve institutional / general education learning outcomes.

(Documentation below.)

The activity was scheduled for March 20 (Honors Project) and March 22 (Year One Promise).

Activity

Honors Project: Only three of the students who'd responded appeared.

As we did not have a sufficient sample to conduct a meaningful discussion, we discussed possible improvements:

- Scheduling: Again, this was an issue for students. Honors students also include a large number of students active in Student Life and Leadership – they are stretched thin, and their time needs to be pretty carefully managed.
- Discussion topics: The topic was well received; the two participants had plenty to say.

Year One Promise: Six students responded, and in fact seven showed up to participate. Faculty attending included the Student Learning Outcomes coordinator, and the director of Year One Promise.

The discussion – a lively and interesting conversation spanning some 90 minutes – was recorded for analysis.

Follow-up

The SLOAC reported out to the Assessment Committee, and to Academic Senate.

While the discussion was recorded, the Assessment Committee did not in fact analyze it; it was difficult to find the time to watch a ninety-minute recording, and the decision was made to improve on the format, and to create a more structured focus group discussion for the following year.

GOAL: To assess skills in **effective communication** skills in student populations, notably their ability to:

- Comprehend, interpret and analyze written and oral information
- Express ideas and provide supporting evidence effectively in writing and in speaking
- Communicate effectively in a group or team situation

METHOD: Structured and moderated discussion involving student populations with contrasting levels of college experience: Year One and the Honors Seminar.

TOPIC: SHOULD WE BE MORE CAREFUL ABOUT SMARTPHONES?

Introductions (5 minutes).

Welcome! Let's introduce ourselves, and get some pizza.

Thank you for participating. Our goal today is simply to hold a discussion. It's the kind of discussion that might precede a writing assignment. But it's not part of an assignment, and we're not going to judge you, grade you, or give you homework. The topic is something that touches on our everyday experience, but is also something that inspires a lot of academic discussion and research in a variety of disciplines.

As students, you can use this as an opportunity to discuss an interesting and important subject *outside* of a classroom setting. As faculty, we want to eavesdrop! Our question to ourselves is, How effectively are we helping you express your ideas?

Opening (5 minutes): Do you have a smartphone? And how often do you think you check it every day?

Moderator prompt: The average person checks their phone 150 times a day, and spends about 5 hours on their phone. Does this surprise you? Does it sound like a lot?

Video (10 minutes): Tristan Harris interview, "Your smartphone is trying to control your life" (PBS) <https://www.youtube.com/watch?v=MacJ4p0vITM>.

Moderator prompt: Here's a brief discussion on some of the issues raised by smartphone use. Please listen, and be ready to talk about it.

Question 1: Standout ideas? (10 minutes). Take a minute to pick one specific thing Harris said that stood out for you – that you connected with or disagreed with, or that just got you thinking. Then share out.

- Why did this fact or statement stand out to you?
- (in response to any claims of fact or references to evidence) Where did you come across that?

Question 2: Smartphones in the classroom (10 minutes). Most of us sneak a look at our phones in class. Do you think that dividing your attention helps you stay focused in class? Or does it get in the way?

Moderator prompts:

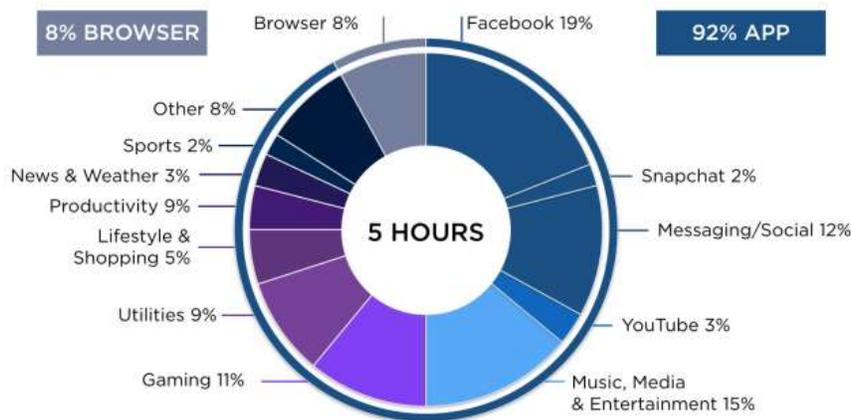
- If you do glance at your phone, what are you looking for?
- (in response to any claims of fact or references to evidence) Where did you come across that?

Question 3: Solutions (20 minutes). In pairs or threes, brainstorm some ways to make sure that smartphones don't get in our way – in the classroom, or in life generally. You could think of institutional policies, or phone design, or ways to keep ourselves disciplined. When you've discussed a few, choose the one you all like best, and present it to the group.

Mobile Media Fact Sheet

- A recent national survey conducted by Common Sense Media, which included nearly 1,800 parents of children aged eight to 18, found that parents spend an average of nine hours and 22 minutes every day in front of various screens—including smartphones, tablets, computers and televisions. Of those, nearly eight hours are for personal use, not work....
(*Scientific American*, “Most Adults Spend More Time On Their Digital Devices Than They Think,” Knavel Sheikh, 3/1/2017, <https://www.scientificamerican.com/article/most-adults-spend-more-time-on-their-digital-devices-than-they-think/>)
- The time U.S. users are spending in mobile apps is continuing to grow; according to new data released this week by analytics firm Flurry, we’re up to 5 hours per day on our mobile devices. This follows on news from January that said the time spent in mobile apps had increased 69 percent year-over-year.

US Time Spent By App Category



Source: Flurry Analytics, comScore, Facebook, NetMarketShare, Note: US, Dec 2016

(*TechCrunch*, “U.S. consumers now spend 5 hours per day on mobile devices,” Sarah Perez, 3/1/2017, <https://techcrunch.com/2017/03/03/u-s-consumers-now-spend-5-hours-per-day-on-mobile-devices/>)

G#: _____

		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly
1	The discussion was engaging					
2	I was able to express my opinion					
3	I feel like we all contributed to the discussion					
4	The questions and materials were helpful in getting us talking					
5	I was able to apply skills and knowledge I've acquired at CSM					
6	The discussion was well-organized and useful					

My studies at CSM have helped me...

6	understand and analyze the materials we discussed today					
7	Communicate effectively in the group					
8	Use evidence to support my points					
9	Interpret the graphs and other statistical evidence					
9	Assess the strengths and weaknesses of the essay					
10	Analyze the interconnectedness of global and local concerns					

Comments (optional):

Thank you!