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## The Opinions Of College Students on Net Neutrality

### **Introduction**

#### ***Net Neutrality Literature Review***

The main purpose of our research study was to investigate the opinions of college students on the topic of net neutrality and why they have these opinions. Net neutrality has been a key issue in the United States since the year 2006 when the FCC (Federal Communications Commission) began to implement rules to keep the Internet free from discrimination between ISPs (Internet Service Providers) and CPs (Content Providers) (Hart, 2011). Many conflicts have occurred since 2006, including a 2008 incident in which Comcast had attempted to throttle users based on their use of a specific program, which was just the start of the fight between the FCC and ISPs (Greenstein, S., Peitz, M., & Valletti, T. 2016). In the past few years many repeals have been made to try and remove the net neutrality policy in the US, which started in 2015 in which the FCC loosened the rules placed on net neutrality for mobile service providers (Gharakheili, 2017). This has become an issue recently due to the head of the FCC changing from Tom Wheeler to Ajit Pai-who both have different agendas for net neutrality. Since then the Federal Communications Commission (FCC) has decided to repeal net neutrality in the US, and there have been various articles describing the viewpoints of those who support net neutrality and are

strongly against the FCC's decision. For example, approximately 57% of Americans support net neutrality and are against the FCC's decision to roll back on regulations as they believe that a lack of net neutrality will allow larger Internet companies to dominate the smaller ones, who will be unable to pay for faster qualities of speed (QoS) or easier access to content (Duggan, 2017).

Additionally, a lack of net neutrality could potentially require Internet users to pay more for faster speeds or may give more power to the ISPs, which would now be able to restrict certain Internet content from their customers, limiting their Internet freedom. More recently, the attorney generals of twenty-one states sued the FCC for deciding to repeal net neutrality as they believe the FCC is prioritizing profits over consumer interests by controlling what they can see, and they are harming consumers, small businesses, and innovation as a whole (Downs, 2018). The abolishment of net neutrality would lead to Internet "fragmentation" which would result in competition between different ISPs and CPs. Smaller CPs would be severely disadvantaged from a fragmented internet, as it would be harder for them to make their content accessible, and the only way to make their content more accessible would be signing exclusivity contracts with ISPs, which would still limit their profits (Kourdani, Kramer, Vellei, 2015). If the FCC was to get rid of net neutrality, it would force Internet users to pay more for a reliable data flow and for access to certain websites. While you do have to pay for Internet now, the Internet is an 'even playing field', meaning that, no matter what ISP you have, you have the same access to websites as everyone else with Internet access. The 2015 Open Internet Order (OIO) that the FCC adopted prevents broadband providers from tampering with or blocking any legal data (Allen, 2016). For example, everyone has free access to Youtube but everyone has to pay for Netflix. In theory, if net neutrality were repealed, companies such as Verizon could force people to pay

more for better Internet/data flow and website access (Bollman, 2010). They could slow down Internet flow for those who won't pay more and would provide the best data flow for those who would pay full price for Internet. A repeal in net neutrality would affect everyone with Internet access. A study done in 2015 showed that eighty-four percent of Americans have Internet access (Allen, 2016). Since then, one can only imagine how much that percentage has grown. With these ongoing changes in net neutrality, many have spoken out against the repeal/loosening of these rules, opting to support more strict policies that would allow no exceptions for ISPs.

### ***Research Gap***

There is a current research gap on how college age students feel about the issue, which is why we decided to carry out this study to collect empirical data from these individuals. The opinions of college students are particularly important as they have to frequently use the Internet for educational purposes, and may even become more reliant on the Internet in the future when they move into their careers. Their voices matter on this issue, and their opinions could also impact how the Internet and net neutrality can be used in the future. We also wanted to know what kinds of demographics-specifically income and political stance-affect the public's opinion. There are many stereotypes that have been formulated, but conducting a survey on the subject is the best way to get concrete data.

### ***Stereotypes and General Misconceptions***

We believe that income will have a significant effect on the net neutrality opinion. Those with higher incomes will be able to afford to pay for Internet flow and access to websites. Those with lower income won't be able to or won't be willing to pay for Internet flow. If a repeal of net neutrality did happen, the gap between the rich and poor would increase. Those who pay for

Internet access would gain a competitive advantage over those who do not. Access to certain websites could give those with the best form of Internet access the opportunity to more information that is valuable for research, job opportunities, and many other possibilities (Ratcliffe, 2017). We predicted that our respondents with lower incomes would be more likely to be against the repeal of net neutrality compared to those with higher incomes.

A common stereotype that was formulated in the past couple of years involves political party. It is believed that Republicans or Republican voters are more likely to be against the net neutrality policy compared to Democrats and their voters. When President Obama was in office, he appointed Tom Wheeler as the head of the FCC (Ammori, 2014). The significance of this is that the President of the United States can appoint the head of the FCC. By doing this, the President can influence the agenda of the FCC and possibly the future of net neutrality by appointing someone with the same views and plans on net neutrality. President Obama appointed Tom Wheeler because they shared the same views on net neutrality-they both wanted to keep it in effect. When President Trump was elected, he appointed Ajit Pai, who still is head of the FCC today. Now, the FCC is trying to repeal net neutrality. We believe that political party will have at least a noticeable effect on our respondents' opinions on net neutrality. We think that more Republicans and their voters will be in favor of repealing net neutrality compared to Democrats and their voters.

### ***Summary***

Due to the controversy of this topic we expected to find a large number of students with very polarizing opinions on the topic, which was at first what we had found, but it turns out that many students supported net neutrality compared to those who did not. We also found out that

many users had claimed that they knew little to none about the policy as a whole. After analyzing and looking over results of the survey, it can be concluded that of the participants who took the survey, and a majority of students claimed to know the basic ideas of net neutrality.

## **Methods**

### ***Survey***

We found that a survey would be the best way to collect and analyze the data we are searching for. Our survey was given to various students at Purdue University, who answered questions about their knowledge, opinions, and stance on the current net neutrality policy, along with expectations from the new policy. We asked questions in our online survey through Qualtrics, where we had the students rank their current knowledge of the policy and how they thought that the new policy would affect online classes and other educational resources along with everyday resources related to the students. We distributed our survey online to various massive group chats on the GroupMe App and tried to get as many responses as possible within the time slot assigned to us. In the end, we were able to gather seventy partial responses and thirty-six full response which we have been able to analyze and draw results from.

### ***Research Questions***

- Do Purdue students have biases of their own about supporting net neutrality?
  - Can this be attributed to college of study or other dispositions?
- Is there a correlation between a student's political beliefs and his or her view of net neutrality?
- Is there a correlation between a student's family income and his or her view of net neutrality?

- How do the opinions of net neutrality vary between domestic and international students?
- Is there a correlation between a student's major and his or her view of net neutrality?
- What do college students think they know about net neutrality?
- What is the perceived change in net neutrality according to students?
  - According to students, how does this affect their academic future?
  - How does this affect their non-academic future?
  - According to students, could a change in net neutrality affect online classes offered at Purdue University?
    - How would students react to this change in online enrollment?
    - Does this vary when looking at students who do or do not take online classes?

## **Methods**

### ***Sample and Distribution***

Our survey was sent to various (GroupME) group chats (via anonymous links) and was also distributed among different fraternities and sororities around campus, from March 21 to March 28 in 2018. We chose to send it out to these groups to have a very wide and diverse set of users take the survey with an emphasis on trying to get responses from international students.

### ***Questionnaire***

Questions were given to the users that asked them to fill in questions about their demographics/background by asking about:

- Gender
- Age

- Race
- Political affiliations in the last presidential election
- Annual Family Income
- Academic standing (ie, are they a student at Purdue currently?)
- College of Study
- Are they currently partaking in online classes?
- Country of Origin

We then prompted users with a quick statement about net neutrality, stating that a repeal is set to happen on April 23, and giving a definition of the net neutrality in order to provide some context about the subject. Users were then given questions about:

- Self-rated knowledge of net neutrality
- Personal opinion on current net neutrality policy
- The user's past in relation to support of net neutrality
- Would a change in policy affect online courses?
- Would a change in policy affect their access to online resources?
- Would a change in policy affect access to everyday resources?
- General feelings toward repeal of current policy

### ***Procedure***

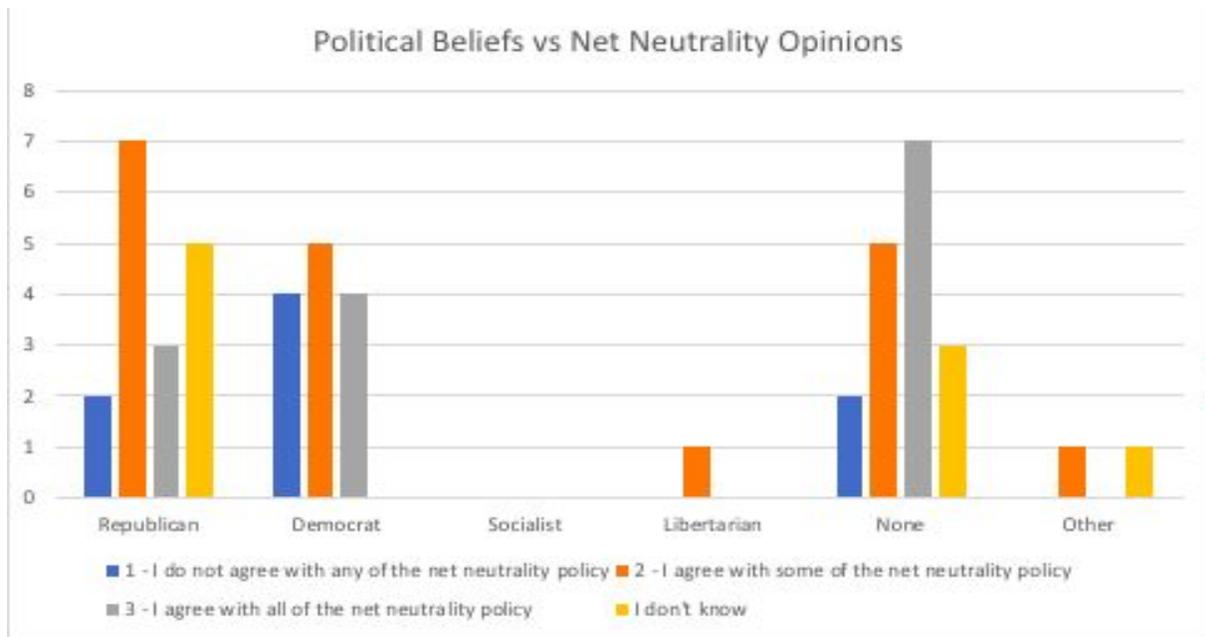
Users of these particular group chats were sent anonymous links that led to our survey on the Purdue Qualtrics website. Included in this link was a page that stated that the survey was completely anonymous and stated that the purpose was for understanding college student's knowledge of net neutrality as a part of the English 106 class at Purdue. Results were then

collected during the week period that the survey was opened, achieving a total number of 70 partial responses and 36 full responses. Our questions included a demographic section, where we asked respondents to identify their gender, race, family income, who they voted for in the recent election, and other questions involving their status at Purdue. We then proceeded to ask net neutrality questions. We wanted to know their personal opinion on net neutrality, and how knowledgeable they are on the subject. We asked how they think they would be affected if net neutrality were repealed. We also included a free-response section, where our respondents were free to share any additional thoughts or comments that they had on net neutrality.

### **Data Analysis**

#### ***Political Beliefs and Support of Net Neutrality:***

The first of my research questions which we would like to analyze is: does a student's political beliefs affect his or her views on net neutrality? Below is a graph examining which political party a student supported in the 2016 election and comparing that data with how much they agree with the net neutrality policy prior to it being repealed.

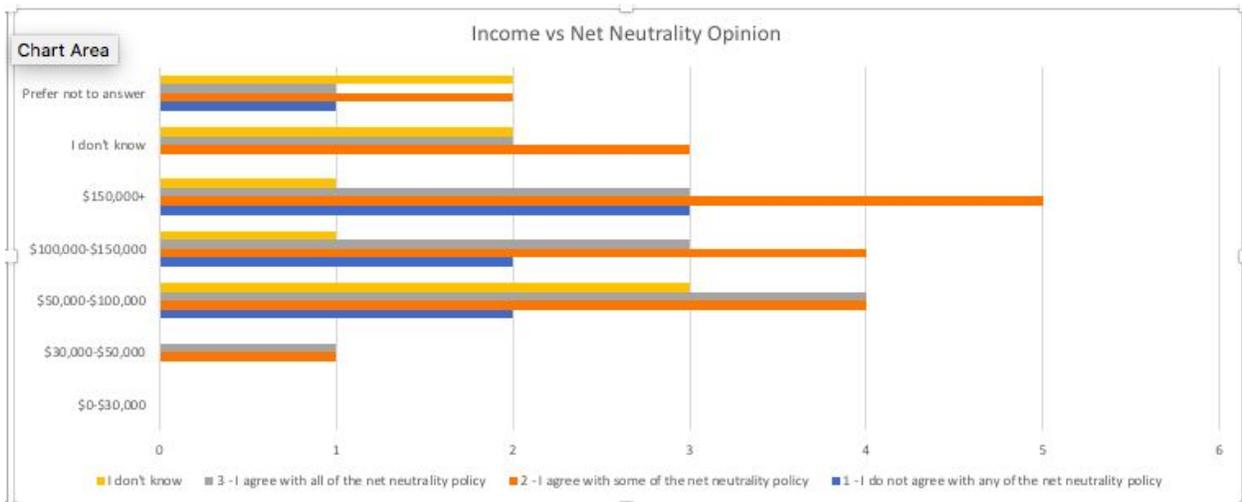


Seventeen of the participants were Republican and of those seventeen, two said they did not agree with any of the net neutrality policy, seven said they agree with some of the policy, three said they agree with all of the policy, and the remaining stated they did not know about net neutrality. Of the thirteen Democrat participants, four said they did not agree with any of the net neutrality policy, five said they agree with some of the policy, and the remaining four said they agree with all of the policy. There were also seventeen people who sided with no political party, and of that group, two of them said they did not agree with any of the net neutrality policy, five said they agree with some of it, seven said they agree with all of it, and the remaining three did not know. The remaining two participants included a libertarian and a person who supported another, unstated political party, and both said they agree with some of the policy. Of all the people surveyed, a total of nineteen said they agreed with some of the policy, fourteen said they agreed with all of the policy, and eight said they agreed with none of the policy. Concluding,

political voting history has a slight effect on support of net neutrality, but may vary in larger cases.

***Family Income and Support of Net Neutrality:***

The next question we want to analyze is: does a student’s average family income affect his or her views on net neutrality? Below is another graph asking participants how much their family income is and comparing that information with how much they agree with the net neutrality policy prior to it being replaced.

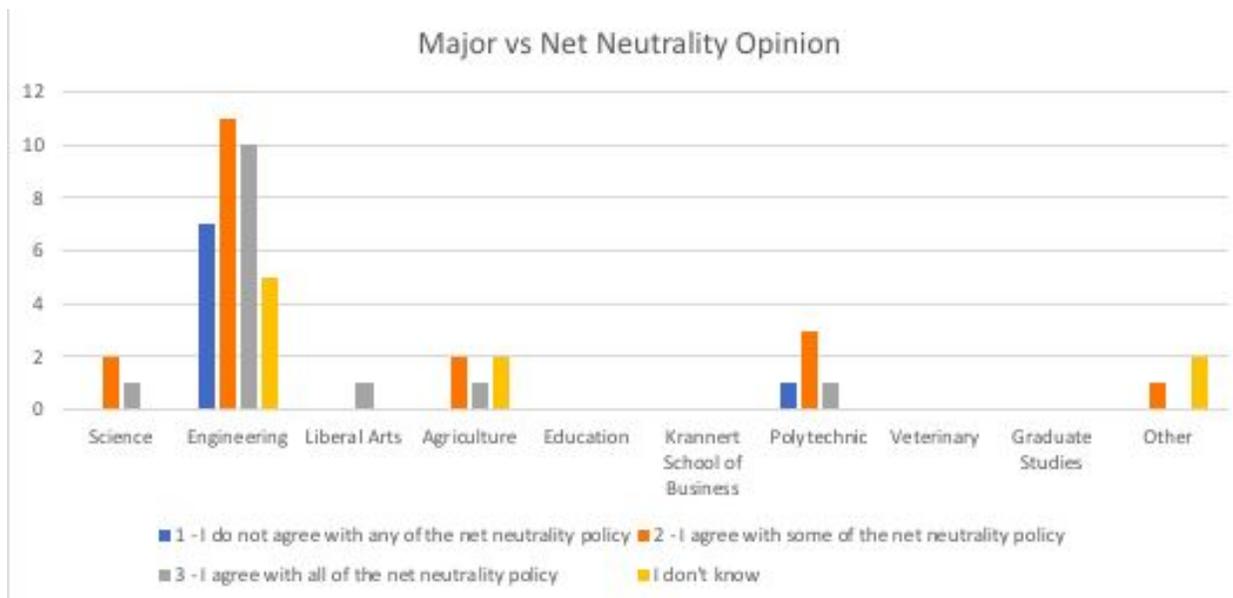


None of the respondents had salaries between \$0 and \$30,000. Two of them had salaries between \$30,000 and \$50,000, and one was in partial agreement with some of the net neutrality policy while the other was in full agreement. Of the thirteen people who had salaries between \$50,000 and \$100,000, two disagreed with the net neutrality policy, four were in partial agreement, another four were in full agreement, and the remaining three did not know much about it. Of the ten participants who had salaries between \$100,000 and \$150,000, two disagreed with the net neutrality policy, four were in partial agreement, three were in full agreement, and

one did not know. Of the twelve participants with salaries above \$150,000, three of them disagreed with the net neutrality policy, five were in partial agreement, three were in full agreement, and one did not know. The remaining participants either did not know their salaries or preferred not to answer, so their responses will not be accounted for in comparing these variables. This concludes that family income has little to no effect on the support of the net neutrality policies.

***College of Study and Support of Net Neutrality:***

We then decided to analyze potential trends between a student’s major and his or her view on net neutrality, as can be seen on the graph table below.



Unfortunately, not many meaningful trends can be drawn from this data as the majority of the students surveyed were in STEM based majors, particularly engineering. For example, we had three participants from the college of science, thirty three in engineering, and five in Polytechnic compared to only one liberal arts major, five agriculture majors, and three from another,

unnamed major. Had we collected a more uniform set of data across all possible majors, it would be easier to compare the opinions that STEM students have on net neutrality with the opinions of those in different majors, and we would be able to see if there is a correlation between major and views on net neutrality. Within the STEM based majors however, there was an almost equal distribution between those who were in partial agreement with the net neutrality policy and those who were in full agreement, although seven of the engineering students surveyed and one Polytechnic student did not agree with any of the net neutrality policy. This means that Purdue students generally seem to have mixed views on the policy.

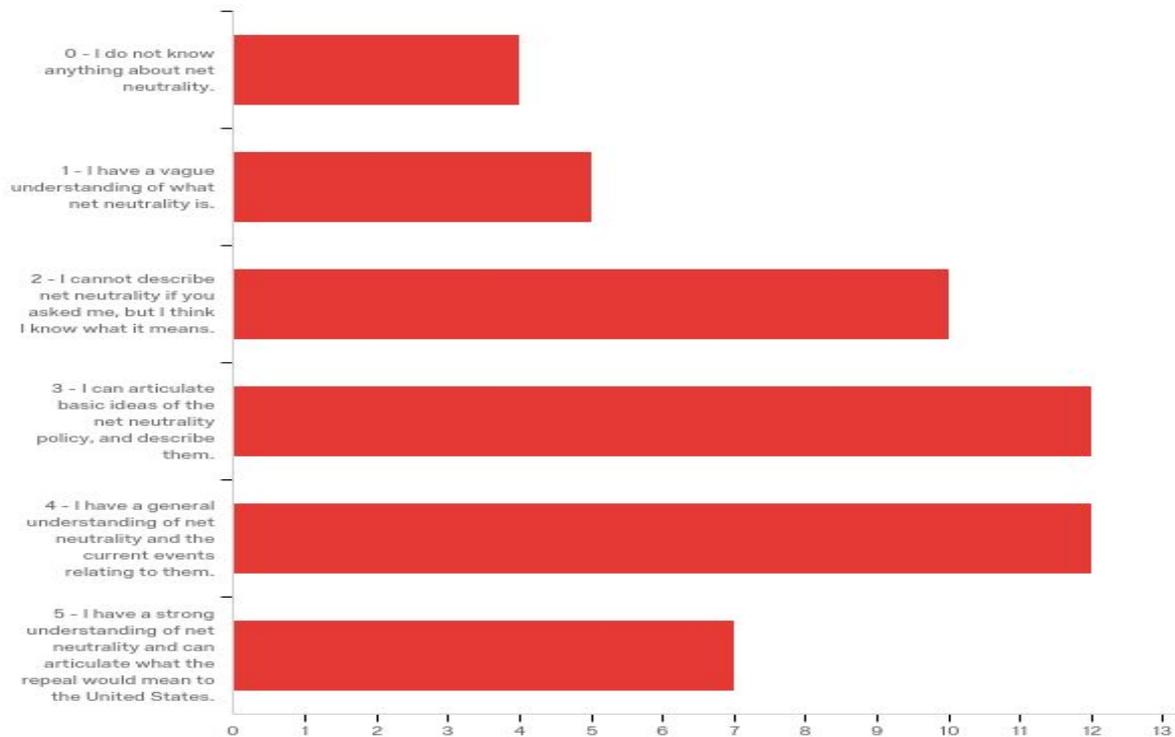
***International Student's Views on Net Neutrality:***

Unfortunately, no significant data was able to be collected in analyzing how an international student's country of origin could affect their views on net neutrality. Only two international students responded to the survey, and both were from India. One was in agreement with all of the net neutrality policy, while the other did not know much about it. We were unable to get responses from students from countries with drastically different net neutrality policies, so no meaningful correlations could be made between these two variables.

Based on the opinions of the few international students who answered the survey questions, many seemed to agree with the current net neutrality policy, or some were unaware of this current policy. This could be due to many factors such as a lack of net neutrality policy in their home country or a lack of knowledge about United States policy. This concludes, based on our sampling, that International students mostly agree with the net neutrality policy, while many Domestic students seem to lean towards not fully supporting the policy.

### *Self-Rated Knowledge of Net Neutrality:*

Another question that we had asked was: What do college students know about net neutrality?



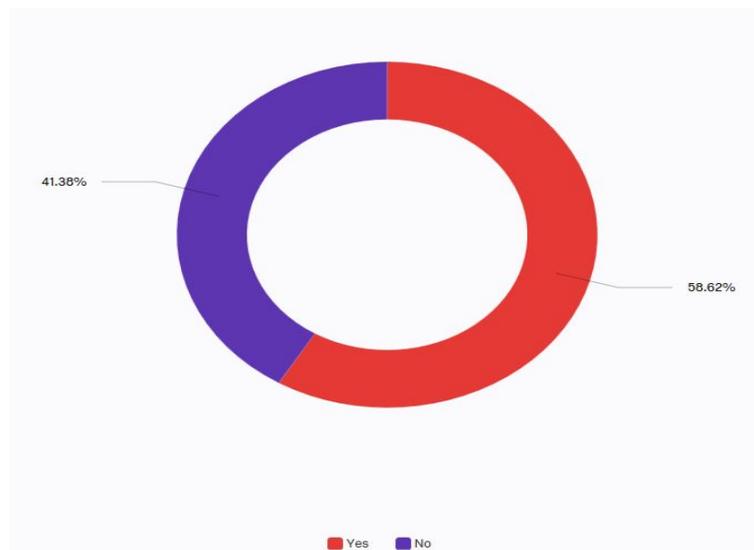
We decided to ask this by having users rate their own knowledge on the topic. They could answer on a scale of 0-5. Zero represents having no knowledge on net neutrality and five represents a strong understanding and an ability to expand on the ideas of net neutrality. Based on our results we can conclude that the average college student claims that they seem to have a basic grasp on net neutrality. Because of our population size, we can determine that most college students know what net neutrality is, but they are unaware of the current events relating to the topic. When cross-tabulating between the college of study and the self-rating of knowledge of net neutrality one can see a correlation between the higher ratings (3-5), which flow from having a basic understanding of net neutrality up to being able to relate it to current events, and those who are in the college of engineering. Over 70% of all engineering students polls answered in

the upper understanding section of the policy, meaning that engineering students tend believe that they know more about net neutrality than other majors in our dataset.

Male participants seem to rate themselves as having a higher understanding of net neutrality compared to female participants, who seem to follow an even distribution when rating their own knowledge. This means that male students are more likely to believe that they know more about net neutrality when compared to female students. Generally though, our data tells us that a large number of college students know about net neutrality and the basic concepts surrounding it.

***Perceived Change:***

As predicted, we found out that a majority of the students do believe that a change in the net neutrality policy could affect their access to educational resources, online classes, and other sources of information on the internet, as can be seen on the graphs below.



The participants who were taking online courses at Purdue University, thought that the current repeal of net neutrality would not affect their online classes at Purdue. Many students

claimed that a change in net neutrality courses would not affect online courses at Purdue, yet a majority (58%) of the total survey population claimed that a change in net neutrality policy would affect online classes at Purdue University. Students who are not taking online classes feel as if a change in net neutrality policy would not affect their online classes, but students who are not taking online classes felt as if it would affect online classes.

We also asked if students thought that net neutrality would affect them outside of an academic setting. 37 people answered this question and 30 of them believed that a repeal of net neutrality would affect their access to things outside of Purdue. When asked to share any additional thoughts in the free-response section, one person answered, “Assuming you mean how do I feel about this fact, it worries me. Net neutrality prevents companies from monopolizing content by restricting competitors, and some of the new policy allows this to happen to a limit(1)es(s) extent. This could potentially lead to rising costs as a result of the fundamental policies of a monopoly/oligopoly.” This respondent believes that a repeal of net neutrality would allow larger ISPs to drive out the lower competition and create a monopoly system.

***Data Analysis Conclusion:***

Based on all of our data as a whole, most respondents are in favor of keeping at least some of the current net neutrality policy. Political stance does not have any effect on the net neutrality opinion, and income has a slight effect. This tells us that those who can afford to pay for Internet, if net neutrality were repealed, would take advantage of the access that they have. They feel that they would not be affected by the amount of money they would need to spend. Those with lower incomes would not be able to afford or would not be willing to pay for Internet if net neutrality was repealed. A competitive advantage would be given to those who could

afford it and that would create an even larger gap between the 'rich' and the 'poor'. The best option for the FCC, if their goal is to please the public, is to keep net neutrality. This would keep an even playing field for everyone, no matter what their income may be.

### **Discussion**

While analyzing trends between a student's political party and his or her opinion on net neutrality, we noticed, surprisingly, that a larger amount of Democrat participants said they did not agree with the net neutrality policy, while we were expecting Republican respondents to be more opposed to it. Regardless, most of the participants seemed to be either neutral or supportive of the net neutrality policy, showing that there was not really a strong trend between a student's political beliefs and his or her opinion on net neutrality.

Similar to the data regarding political parties, there does not seem to be a major correlation between income and views on net neutrality. We were expecting more people whose incomes were above \$100,000 to be more against net neutrality. However, most people who responded seemed to be either neutral to or supportive of the net neutrality policy, regardless of their family income. There were a few people in each section (about two to three) from \$50,000-\$150,000+ who did not agree with any of the net neutrality policy, but this is not enough data to be able to draw significant trends between income and net neutrality views or conclusively state that people with larger incomes are more dismissive of net neutrality.

Based on the data collected, we were not really able to make any meaningful correlations to answer my research questions the way we predicted, but we were able to determine that most of the participants in general were more supportive of net neutrality, showing that their

background, including their political beliefs, country of origin, or family income, does not really impact their view on the subject the way we thought it would. This could be due to the fact that college students could be more reliant on the internet to begin with, for educational purposes and for completing assignments, so they could possibly set potential background information that could negatively influence their view on the topic aside. This is especially due to the fact that the majority of the respondents said that a change in the net neutrality policy could affect their access to online classes, educational resources, such as WebAssign, and other types of information on the internet. Another possibility is that they may not be well informed enough of what net neutrality is to have a really strong opinion on it, so they were more inclined to be generally supportive of it.

One conclusion that can be formed from the results of the survey is that a large number of students in the college of engineering seem to mostly support or fully support the entire net neutrality policy. This could be attributed to a large amount of factors, the main one being that our survey consisted of a large majority of engineering students (61.6% of the total survey population). This result could be due to the sheer numbers of engineering students polled compared to the low numbers for every other college of study.

Due to the small number of responses from students currently taking online classes at Purdue (only 15% of the total survey population), we cannot conclude that online students either are more likely to support net neutrality or least likely to support net neutrality. This may be due to the small sampling size of the survey, or small population of students taking online classes across Purdue.

Many college students claim that they know at least the basic ideas of net neutrality. 24% of the polled users claimed to know the basic ideas, and 38% said that they know about the basic ideas of net neutrality and the current events relating to it. From this data one can conclude that a majority of college students think they know of the net neutrality policy.

### ***Limitations***

The survey data collected turned out to be very inconclusive and did not encompass a large amount of responses. There was not much variation in our respondents' answers on multiple questions in the demographics section. This could be due to a myriad of reasons, but we determine that this is due to the distribution method taken. If the survey were to be repeated a larger number of students of various backgrounds would be polled.

### **Conclusion**

In the grand scheme of the net neutrality debate, we can conclude from this research that for the most part, college students mostly have generally positive or neutral views on the topic, and potential background factors are independent from their current beliefs on the subject. We have also concluded that a majority of college students believe that they know at least the basic ideas of net neutrality.

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