

Group 4

Jason Clark

Triston Powell

MacKenzie Randolph

Delano Gipson-Lyles

Assignment 1B

Problem Description:

The problem that our group would like to tackle is how can school districts and communities provide a better internet connection to help students learn if they are online. The schools that my group are focusing on are ones in rural communities, which means small towns, villages and open country. Technology is becoming more popular in schools with computer-based testing and learning management systems. Also, with the COVID pandemic, many schools across the country were virtual during this time. For example, students and teachers communicated through Zoom, Microsoft Teams, and Google Classroom every day. However, rural communities may have unreliable internet connection and are subject to throttling all while being too expensive to upgrade to a faster speed. This results in students getting paper copies of school work, which leads to kids teaching themselves. This issue can become significant because it can contribute to students falling behind academically compared to students in urban communities. For students to get the education they need, concerns of the schools and internet companies will need to be considered. In doing so, our team can find the best solution for everyone involved.

Problem Analysis:

For many of the different rural communities, the circumstances may be different regarding why internet connectivity may be poor. In most circumstances, the solution may be solved by inhabitants adopting a connectivity service that utilizes DSL, Satellite, dial-up, or hotspot technologies. Though these services may have a larger area of coverage, the overall usability of these services may vary due to lack of serviceability, slow speeds, high prices, and spotty coverage. Prices for cable internet in urban areas start at \$50-55 and speeds of 150 Mbps whereas the satellite option could range from \$150-200 for the same speed. If a rural household on satellite was going to pay the same price as an urban household on cable, then the rural household would pay \$50 for only 12 Mbps.

For any schools in these areas that are considering using internet services for educating children, these issues may make it difficult for them to want to make the transition. One way to combat this issue may come in the form of computer education programs being provided via flash drive. The content loaded on these drives could include an entire class's worth of information where the data may include recorded lectures, electronic books, and even exercise activities that may be useful for students to understand a subject.

Feedback Review:

The initial idea was to ensure that rural neighborhoods had better internet for students who do online learning to have a more efficient source of being able to connect to online courses or do homework online. Our potential plan would also help anyone who works from home using online applications or sites. With us being in a time of a pandemic where people are less likely to leave their homes, it is important for people to have reliable internet access so they can be

productive from home. Being productive could involve school or even working. Some students who do online courses struggle to do these courses because they have internet issues so it affects their production level and can be very detrimental to their work.

The feedback activity helped us understand how expensive new and improved the internet would be to incorporate in these rural neighborhoods. A solution we were told during the feedback activity was that we should consider having a certain area in these neighborhoods designated for the people who wanted or needed to use the improved internet. This area would not only be helpful for those who need better internet access, but it would also allow everyone in the neighborhood to have a time and place to interact and meet their neighbors.

Contributions:

Jason Clark: 25% researched some of the background of the problem, made contributions in writing the problem analysis section.

Triston Powell: 25% researched information and statistics about our problem and contributed to the problem analysis section.

MacKenzie Randolph: 35%, outlined the content of the document; wrote the first and second version of the problem description; pitched the idea to the class to receive feedback

Delano Gipson-Lyles: 15 %, completed the feedback review, gave feedback to the group we were paired with

Citations

<https://blinqnetworks.com/why-is-rural-internet-so-bad/>

[Satellite Internet vs. Cable Internet | SatelliteInternet.com](#)