How Many Presidential Scholars Does it Take to Read a Bus Map? Ten

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This collaborative article is an exploration of student interactions with the genre of maps and the qualities that make a map effective for a student demographic. Upon further investigation, the authors concluded that a hybrid approach was necessary to format maps in a way that is useful for students.

Woeful Tales of Travel

In late September, just one month after beginning her college experience in the Bloomington-Normal community, Illinois State University freshman Laura tried to go to the AT&T store to buy a new phone. Laura did not have a car on campus and had no idea how to get to the store. With no other option, Laura was forced to take the Connect Transit bus. She was resistant to this form of transportation because, as a navigation novice, she was quite convinced she would get lost. As a class, we tried to help Laura by looking at the community bus map together, assuming our killer ACT scores would mean we could easily decipher a map. Instead, our group of Presidential Scholars stared perplexed at the web of neon-colors that was the community bus map. We realized that while many students need to travel off campus, many do not know how to find the tools to help them navigate the transit system or decipher its information. We asked ourselves: why was this map particularly ineffective and what could potentially make it better?
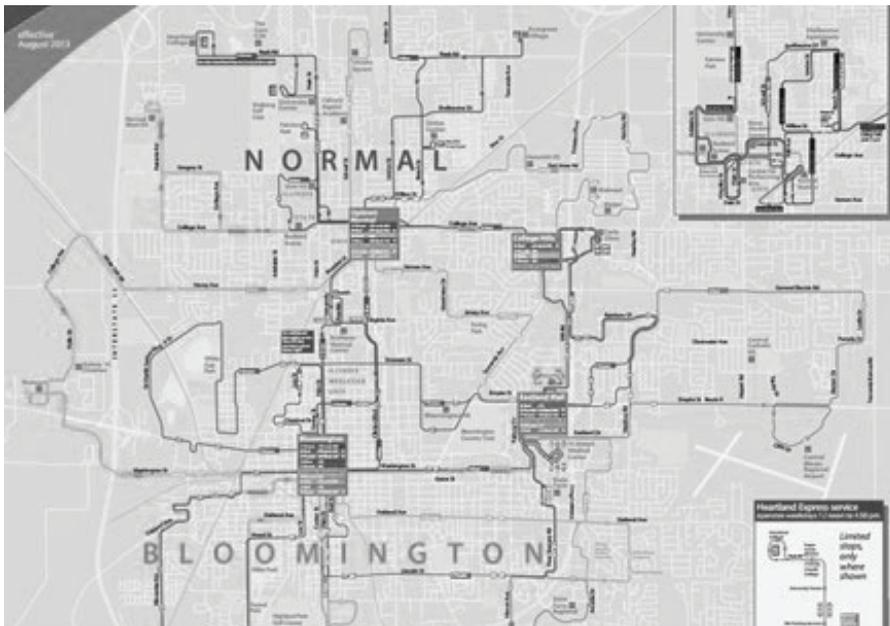
Figure 1: Official Connect Transit Map for Bloomington/Normal Routes

So Now What?

We needed to figure out how to navigate Bloomington-Normal through the Connect Transit bus system, but the map provided by the bus company was doing more to disorient the ten of us than help us get to our destination. We decided to take some time to research the ways in which the university and its students interact with the bus system. Was it just us struggling to read the map? Does the university know that students have difficulties with it? Do they care? Did the bus company conspire to make it so difficult to read that we would not use the free transportation with student ID? We decided that in order to answer any of these questions, we first needed to figure out exactly what and/or where the problem was. Since this was a daunting task, we decided to divide our English 145.12 Composition for Presidential Scholars class into groups before we started. We went with a committee-style division of the class to ensure that all relevant topics would be covered within the project. These committees focused on four specific areas—Survey, Sustainability, Management, and Research—and came together to share their findings. We conducted our research within several ISU departments and the Connect Transit Company, and we collected a vast amount of information pulled from online research, peer surveys, and interviews with public transit officials within the university.

Perhaps the most enlightening data we used in our study was the research projects given to us by our instructor from her English 101 Composition class.

This is another class that focuses on the ideas of genre and composition, also taught by our instructor. She asked her students to travel to a specific location using the bus map and other resources and to present their experience through written maps and directions. We felt that it would be valuable to look at what students already knew about mapmaking and directions. These projects from the other class provided us with insight into what parts of the transit map genre students could navigate effectively, and what parts they needed more help on and could be clarified. Some students drew maps by hand, some provided only written directions, some simply took selfies, and others used Google Earth to find route images. Despite the wide range of genres used, all were confusing and provided insufficient information to help us understand their directions, but the overarching message that we gathered from each of them was invaluable. After looking at these projects, it was clear that the average college student was unfamiliar with the genre of transit maps and not comfortable giving directions.

Science of Mapmaking

Next, we decided it was important to define what a transit map is supposed to do in order to investigate and solve the issues that students have with understanding maps. According to Dr. Himley, a professor in the Illinois State University Geography/Geology department, a good map "convey[s] enough of the right information in a concise way." When we first pulled up the Connect Transit map, our initial reaction was confusion. Dr. Himley took a few minutes to look at it and determined that we were right to be confused. It was difficult to read, lacked important location labels, and the insets made it impossible to tell where the bus actually stopped. One of the positive aspects of the map that we identified was the arrows indicating departure, transit and arrival times throughout each route. These arrows are useful for students who want to closely plan how long a trip will take or how they will transfer routes.

We decided to look at maps of transit systems on other college campuses to analyze their map techniques. What we found was that there is no such example of a perfect map. There was nothing we came across that incorporated all the relevant information (arrival times, street names, important buildings, etc.) without feeling cluttered and confusing. Each map had different strengths and weaknesses, but all seemed to fall flat as to what we felt students needed.

One map example we analyzed was the bus map for Indiana University. Unlike the Bloomington-Normal map, which suffered from a lack of side
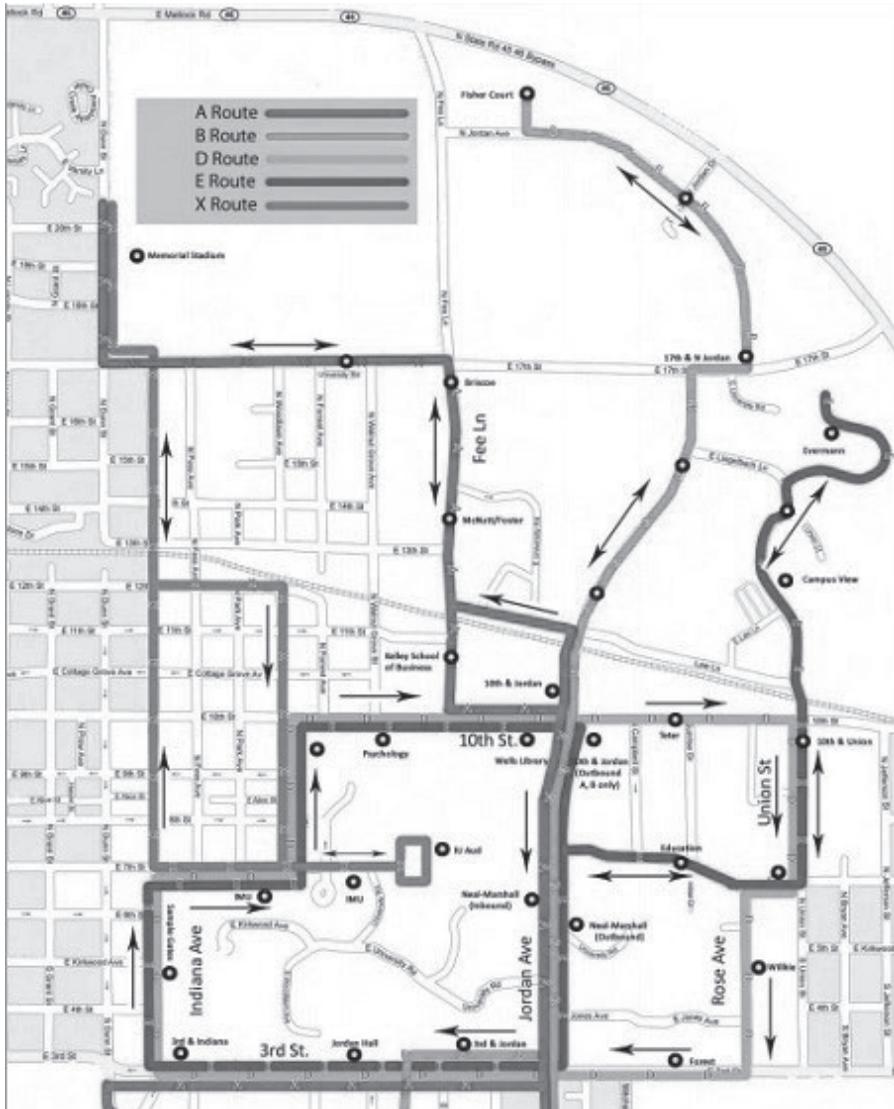
Figure 2: The Indiana University Bus Map

street names, the map for Indiana University identified every single street in the area, making it easier for students to keep track of exactly where they were going. This map also identified many on-campus locations that are probably of interest to students, such as academic buildings. In comparison to the Bloomington-Normal map, however, this map lacked arrival times throughout the routes to help students plan.

From looking at these and other such transit maps, we determined a set of criteria for what makes a good map. Good transit maps need to show not only specific routes, but also side streets and nearby places of interest. They should also indicate the relative times of departure and arrival to provide for

accurate planning. We also noticed that certain university websites had online interactive maps that provided isolated directions to a particular place. Even with all of this information, maps can be difficult to decipher because too much clutter makes the graphics cramped and hard on the eyes. Based on all of this gathered information, we came to the conclusion that a simple map was not going to cut it to help students; they needed more information than just a map by itself to use the bus. We realized that integration of another genre or several genres would be required. The antecedent genres that we needed to analyze were not only maps, as we initially thought, but also written directions, interactive websites, and video/audio components.

Generating Genre

After considering both what we considered a "good" map and students' ideas of maps and directions, we questioned if the majority of our generation was able to interpret traditional transit maps. Since most students rely on technology such as apps, GPS, and Google Maps, they don't often need the skills of knowing how to interpret an old-fashioned map and figuring out directions. Smartphone apps can be accessed anywhere, and GPS systems can be programmed to find multiple routes based on traffic patterns. Students have antecedent knowledge of genres that are interactive and respond to information that they input, an experience they cannot have with a paper map. Their antecedent knowledge of maps works on the assumption that the map will respond to them based on the information they input. They are unable to have this experience with a static map. Based on the experiences of other students at ISU that we gathered through the previously referenced research group and student surveys, we determined that the bus maps are difficult to use for two main reasons: 1) the maps are written in a way that is inaccessible for this audience and, 2) students are unfamiliar with the genre of transit maps.

At this point, we were somewhat at a standstill. We knew that maps are helpful, but the Connect Transit map was not conveying sufficient directional information to students. We explored options other than making a map; we wanted to create something that was simple to understand and contained all the information necessary for students to travel around Bloomington-Normal using public transportation.

It was at this point that we started to use Cultural-Historical Activity Theory (CHAT) to determine how to best incorporate different genres into a cohesive tool. CHAT argues that writers are influenced in their work by a variety of factors that include their environment, knowledge of antecedent

genres, and their personal experience. We knew we were writing to students, so we needed to consider what knowledge and skills they possess and could utilize. The English 101 research showed us that students are not strong in deciphering maps and directions, but we knew from personal experience that they are increasingly comfortable with navigating online and using interactive web resources. We specifically focused on where CHAT looked at production, distribution, reception, and socialization of new genres. We decided that if we could produce transit maps and directions in a way that students have been socialized to understand and appreciate, they could be better received and distributed by the target audience.

Our first thought when coming up with alternative ways of giving directions was to use the materials that were already in place for the Connect Transit system. We discussed using their bus route map as a base and including on the map specific locations that students would want to go. However, we decided against this option because the public transit bus map is, in our opinion, too cluttered already. Adding a few locations to the map would only make it more difficult to decipher. We then discussed the option of creating our own simplified version of the current bus map and printing brochures to give to students. This option was a closer fit, but we concluded that it would be frustrating to receive a brochure that only had a few places to go because nothing else could fit onto the piece of paper. We also wanted to do something digital, since students tend to be technologically inclined. This brought us back to the Connect Transit website. The company has an app that allows users to track their bus. The app includes the actual route maps, so that it can be used as a reference anywhere. This further solidified our desire to create something accessible and applicable to current technology. However, nobody in our group had created an app before, and with the time restraint on the project, we concluded that an app was not quite the correct genre either.

After these deliberations, we took a step back and tried to determine the positives and negatives of the genre of transit maps. Our research indicated that students prefer having maps in order to visualize their route and destination, but they also benefit from step-by-step instructions, similar to those provided by MapQuest or Google Maps. Our class was familiar with these antecedent genres and knew that someone could plug in their current location and the address of their desired destination, and the website would produce step-by-step instructions alongside a map. Unfortunately, we discovered that Google Maps does not provide directions for bus maps in the Bloomington-Normal community. We still thought, however, that it was a useful resource for looking at side streets and nearby places as well as its Google Earth feature. Through many discussions, we decided on creating some sort of hybrid with maps and step-by-step directions.
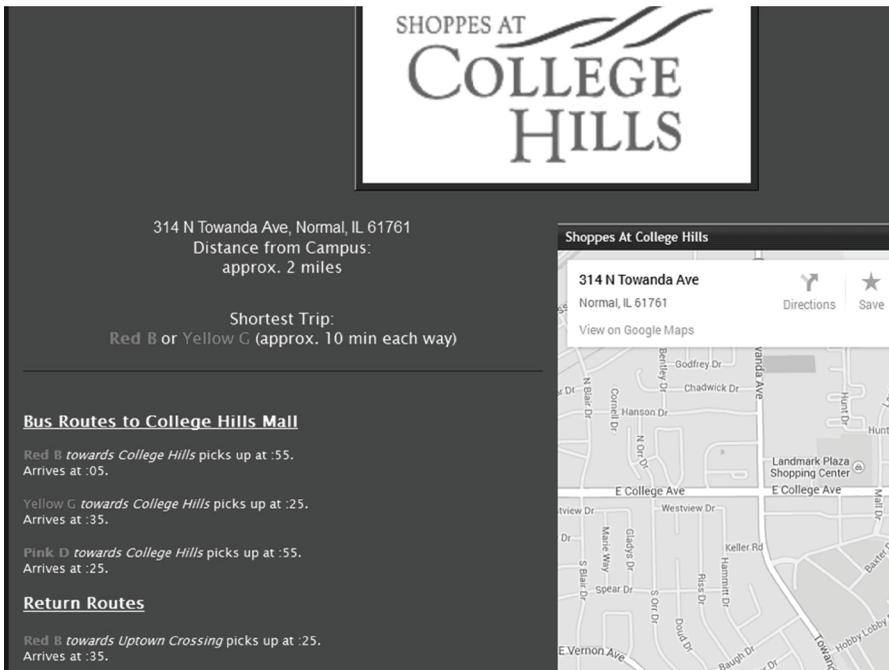
Figure 3: A Sample Page of our Website Showing Routes to College Hills Mall and an Interactive Google Map

Website Work

Ultimately, we determined that making a website would be the best way to present this hybrid, since doing so would allow us to create our own platform while utilizing existing technology. Websites are simple enough to design and maintain; we would be able to do every part of it ourselves. We would be able to link our website to the Connect Transit site as well as the sites of our destinations. It was also important to incorporate existing technology that students had antecedent knowledge of and use as many pre-created maps as possible. Our goal was not to rewrite the maps, but rather decipher them and condense our conclusions into short, user-friendly directions. One of the students in our class also knew from a previous project that Google has a website building tool that is free and user friendly, and could also integrate Google Maps onto the pages. We explored several parent domains for our website such as *Blogger* and the personal blog space provided by ilstu.edu to every student. However, these sites did not seem to lend themselves to the creation of this project. Google also was the only site that could integrate an interactive map feature into its pages. Ultimately, we decided to build our website through the Google platform. It offered a blank template that would suit our project and allowed multiple managers so that each of us could edit it and add our personal research. It was easy for us to insert Google maps and directions, consequently capitalizing on pre-existing technology. Once we decided on this forum to present our findings, we were on our way towards sharing what we had learned with the students of ISU.

The next task for us was to actually design the website and organize everything so that it would be as user friendly as possible. We knew that making maps and giving directions to our target audience would not be an easy task, so it was somewhat difficult to decide how to organize the website. We explored the Connect Transit website and noticed that it only provided maps for each route, and that it was up to students to figure out how to get to specific places using these maps. We wanted to provide clearer instructions not only over a route, but also to specific places that students might want to go. What we settled on was fairly simple: we chose to use very basic designs in hopes that people would find the website easy to use. On every page, the user can mouse over the tabs on the top of the page that allow them to select a more specific category of what they might be looking for. For example, if a person wanted to find something fun or exciting to do, he or she could select the tab labeled for recreation and then be taken to a whole new page with places to go. On each destination page, we listed all the bus routes that would get students to that place. Additionally, we tagged the bus routes at the bottom of each page so that users can then click on any tag and be taken to related pages. In short, the website allows users to easily explore different destinations that may fall along the same route as the original point of interest. These different search options provide users with many ways to access the information they want and decide which form is most helpful to them. With all of these pages completed, we needed some way to put our own unique touch on the website.
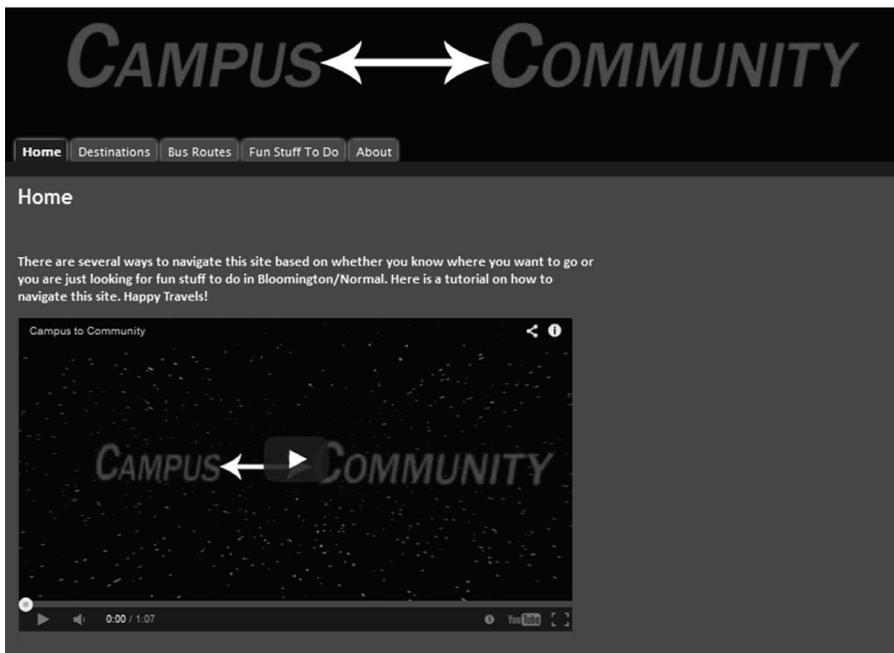

Figure 4: The Finished Tutorial Video on the Home Page of the Website

After organizing our site, we noticed that the format was extremely boring. We decided that if students were to see just text and a white background, they wouldn't be compelled to use the site. For this reason, we decided there was a need for color. None of the preset background color options were appealing to us, so we thought they wouldn't be for other students. Therefore, we decided to create our own color scheme and base it off the school's colors because we thought it would be more attractive to students. We also wanted to convey the information students need to know in the most concise way possible. Usually, if students see big blocks of text, they are less inclined to read it. This is also why, instead of typing out formal instructions on how to navigate our site, we made a tutorial video. One of the Presidential Scholars in our class had previous experience with making and editing YouTube videos and knew that it is a popular medium for students to use. Most students would much rather watch a short video than read instructions, so we kept it short in order not to lose their attention. This still left each destinations page bland with only text and a Google Maps image. In order to add some excitement, we decided to put each destination's logo at the top. This allowed for more color and broke up the straight text. To spice up each bus route's page, a map of the city with the highlighted bus route and arrival times was placed on each page. On the "Bios" subpage, we added pictures of our class to break up the monotony of the words. We placed a Wordle image on the "Home" page because we had too much empty space. Overall, it is important for the site to be creative, colorful, and engaging to our audience so that they feel more compelled to use it.

One of the biggest challenges we faced during website creation was how to write the "About" page. We struggled to concisely summarize our purpose without boring readers with huge chunks of text. We knew from other "About" pages on websites we had visited that this page is meant to convey crucial information about the purpose and origin of the site. This page also needed to answer some of the critical CHAT questions of "who, what, when, where, why, and how" this new genre was organized and created. We decided to organize our page with these question words as section headers. This served the dual purpose of streamlining the page's look while also organizing information in a helpful way for users. We limited "who," "what," "when," and "where" to one sentence each, since they only require simple answers. Our answer to "why" was also limited because we felt that the reasoning was fairly obvious: to travel in the Bloomington-Normal community. We focused most heavily on the question of "how," since the focus of this project was to do writing research in a particular genre. We wanted to articulate the steps we took in this process and some of the assumptions we were working under. At the bottom of the page, we placed a link that takes website users to our individual bios. Just as the "Presidential Scholars" link in the "who" section provides more information about the program we are all a part of, we thought that adding individual bios made the website more personal. Who

better to relate to students trying to navigate the Bloomington-Normal area than other students? The website is meant to be a connection between the campus and the community, and so the more personal the website feels while still maintaining professionalism, the better.

Writing Wrap-Up

This research endeavor provided us with valuable insight about several key aspects of writing. As we went from analyzing the shortcomings of the bus map to creating a website to remedy these issues, we learned that writing is flexible and often guides ideas in new directions. We also found that understanding the audience influences the writing genre. We discovered that a transit map was in fact the right genre; however, it was presented ineffectively. The solution was simple. We determined that students have difficulty reading the bus map because it is not a genre with which they are familiar. Through exploration of the conventions and limitations of maps, we recognized that by utilizing and blending existing genres, we could connect Illinois State University students to places in Bloomington-Normal.

If you are interested in viewing our completed website, you can find it at: https://sites.google.com/site/camsdpustocommunity/.

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The authors are freshmen Presidential Scholars at Illinois State University and members of the English 145.12 class under the instruction of Kate Browne. These students include **Nora Fredstrom, Fawna Goldi-Wasson, Hannah Kehe, Mike Lisack, Jennifer Morley, Cassie Myroth, Beau Ott, Laura Rocco, Katie Tollakson,** and **Wes Ward**. As a group, they share interests in writing, listening to music, and twerking. This class brought together ten students with different personalities, but they were able to collaborate and use their different talents to tackle this project.