Campus Biking: Challenges and Strategies

The Campus Bike-Right Project at Cornell University, Ithaca, NY

Photo courtesy Dan Maas

By Lois E. Chaplin
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In recent years, Cornell University has witnessed a dramatic upswing in bicycle usage, a welcome development in the face of campus congestion. However due to the lack of planned facilities, limited law enforcement, and a demonstrated minimal skill level among cyclists this trend only added to the existing confusion. As a result, many challenges were developing with respect to safety. It became necessary to take a closer look at the congested Cornell Community.

This report describes some of the efforts that were undertaken to identify and address safety concerns and the work of those who became involved in the Campus Bike-Right Project from 1991 to 1997. Although there are numerous overlaps, the activities have been presented under these major headings – Education, Engineering, Enforcement and Encouragement. The 4-H Youth Education section summarizes the components of the youth development and outreach efforts that were a part of local activities but also involved agencies and organizations throughout the state.

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Data collection and analysis

Pedestrians and bicyclists represent a significant portion of our nation’s motor vehicle crash problem. New York State’s staggering 28 percent of traffic fatalities each year that involve pedestrians or bicyclists is nearly double the national average. New York State Department of Motor Vehicle accident reports for the years 1990-1993 show that 21 percent of the traffic-related fatalities in Tompkins County involved either a pedestrian or a bicyclist.

Early campus-based data collection efforts were published in “Cornell Cycles,” a document that has served as the benchmark for engineering endeavors over the years. The first campus survey identifying cycling needs and concerns was included in that report.

The Cornell University Police were particularly instrumental in the initial stages of data collection. Essential crash data were made available through their records, providing information about accidents reported to the Department of Motor Vehicles. Each year, there is a range of 10-20 crashes involving cyclists on campus roads. A study of crash data from the city of Ithaca rounded out the information.

Recognizing that only a portion of bicycle crashes are reported to the police, a project was undertaken to collect data from persons who came into Gannett Health Center with a bicycle- or pedestrian-related injury. From these reports, a profile was developed of crash types, causes, and those involved.
Important findings included (see Appendix for more details):

1. almost half of the bike crashes reviewed in the city data occurred at night or dusk with the bike having no lights;
2. many crashes occur at a controlled intersection with the cyclist at fault for not obeying the traffic control device;
3. motorists are at fault in a significant number of incidents by making a left turn into the lane of the oncoming cyclist;
4. overwhelmingly, the cyclists involved in crashes are male and the 18-25 year olds are over represented;
5. helmet usage is observed at a very low rate;
6. many cyclists report losing control (lack of skill) as a cause of the crash.

Implications for education

The project’s vision would be to develop a campus culture where pedestrians, bicyclists and motorists can share the road - safely. Targeted messages were developed to outline what all travellers can do to realize this vision:

<table>
<thead>
<tr>
<th>Bicyclists</th>
<th>Pedestrians</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wear a helmet</td>
<td>• Walk on the left side of the road, facing traffic</td>
</tr>
<tr>
<td>• Ride on the right side of the road</td>
<td>• Cross the street only in crosswalks</td>
</tr>
<tr>
<td>• Yield to pedestrians in crosswalks</td>
<td>• Wear reflective clothing</td>
</tr>
<tr>
<td>• Use a light when biking at night</td>
<td></td>
</tr>
<tr>
<td>• Wear reflective clothing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motorists</th>
<th>For Everyone</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Obey the speed limit</td>
<td>• Be predictable: obey traffic laws</td>
</tr>
<tr>
<td>• Allow plenty of time and space when passing cyclists</td>
<td>• Make eye contact with others</td>
</tr>
<tr>
<td>• Don’t travel or park in bike lanes</td>
<td>• Be alert for the unexpected</td>
</tr>
<tr>
<td>• Yield to pedestrians in crosswalks</td>
<td>• Don’t wear headphones</td>
</tr>
<tr>
<td></td>
<td>• Limit alcohol consumption</td>
</tr>
</tbody>
</table>

Subsequent educational endeavors had the following focus:

• to increase awareness of health risks associated with cycling;
• to increase helmet usage;
• to increase knowledge of the new sidewalk diamond system (see p.13);
• to encourage awareness of state and campus regulations;
• to promote community cooperation and personal responsibility,
• and to develop safe cycling techniques.
A campus sub-committee

At the same time that data were being collected and the educational directive was forming, a group of people from several departments/units began meeting to form a committee. Representatives from CU Police, the Judicial Administrator’s Office, Transportation Services, Gannett Health Center, and a Cornell employee/cyclist (although arguably “token,” providing valuable insights from the perspective of campus bicycle users) formed the core group. Most recently a representative from Environmental Health and Safety has joined the committee. The committee’s status is that of ad-hoc advisory to TAC (Transportation Advisory Committee). Meetings are held monthly.

Its goals are to:

- Recommend strategies to increase and expand community awareness and education around safety issues;
- Formulate policies and strategies to reduce cyclist/pedestrian/motorist conflicts on campus;
- Make recommendations regarding campus facility needs that will eliminate roadway hazards;
- Recommend additional actions that will encourage and incorporate safe bicycling on and around the campus;
- Serve as a sounding board for the community’s concerns about pedestrian and cyclist safety.
Bike Registration

One of the first actions to be undertaken was to implement a bicycle registration program on the campus. This free registration has been promoted as a good way to protect one’s bike against theft, to aid in retrieval in the event of theft and to assist the university in tabulating a bike census. It is designed to serve as an educational avenue and to establish credibility for the bicycle as a viable mode of transportation.

Registrants receive the Bike Right brochure (see page 5) and a sticker to be placed on the bike. Recently, e-mail addresses were added to the registration card. Having e-mail addresses provides an opportunity for pertinent information to be sent to bike owners, but we are finding that the database must be modified if it is to be more useful. We are able to tell how many people have registered a bike since its inception, but the lack of a purge feature, which would remove names of persons who are no longer Cornellians, limits the generation of an accurate accounting of current registered cyclists.

In general, there has been acceptance for the bike registration program, although some resistance has been met. Students in opposition to the program resent the fact that the university has one more piece of information about them. They complain that it only can be to a cyclist’s disadvantage to register the bike, because they can then be tracked down if they are parked illegally. People who are choosing to own a bike instead of a car are chagrined at facing the administrative hassle that they were avoiding by being carless.
We still do not have a reliable way of accounting for the number of bicycles on campus. A project on the list of things to be done includes taking an inventory of the number of registered and un-registered bicycles in bike racks on campus on a given day.

**The Bike Right Brochure**

Another early accomplishment was the *Bike Right Brochure*. We felt it was important to design a document that outlined the rules and guidelines that cyclists would be expected to follow on campus. Based upon vehicle and traffic law, the brochure outlines the basic rules of the road, regulations particular to the Cornell Community and additional safety tips. It also includes a map illustrating the bike lanes and shared (cyclist/pedestrian) walkways on campus.

*In One Piece*, another brochure designed as a part of this initiative targets a broader audience than cyclists alone. It addresses motorists, cyclists, pedestrians and skaters, outlining the rights and responsibilities of each.

**Incentives**

Stickers, slap bands, leg bands and water bottles have been used as incentives and prizes for those who either registered their bike or participated in one of the drawings that were held as part of the educational displays (described later). The reflective stickers carried the safety message *Be Safe Be Seen*. The slap bands said *Be Smart Bike Right*. These messages were also featured in the brochure. The reflective and elastic leg bands were useful during the time when the educational message targeted pedestrians. The water bottles carried a message about the importance of using a light if one is cycling at night (*Bike at Night? Use a Light*). Bike lights were also given out as prizes and helped to reinforce the visibility concept.
Coffee mugs were designed as a thank you to those in administrative positions, who have an opportunity to influence the walking and cycling environment. The message *Try Biking or Walking... it does a world of good* was designed to encourage people to walk or bicycle and that these are healthy activities that are good for the environment and community.

**Helmet Initiatives**

The first step with Gannett Health Center on campus involved the development of a survey tool to document how many visitors through the walk-in center had bicycle- or pedestrian-related injuries. Knowing that a significant number of injuries don’t involve motor vehicles and thus don’t get reported, we decided to track this trend through the Health Center’s walk-in unit. This involved designing a survey that was easy to implement and working with the nursing staff to get their support and participation. The data provides a more complete picture of the local crash situation.

**Low-cost, quality helmets**

After reviewing injury data, risk factors and the high cost of helmets sold locally, staff at Gannett decided to focus on ways to increase awareness of the importance of helmets and to make them readily available to the Cornell Community.

A small grant served as seed money for the purchase of several hundred helmets. This bulk order allowed for the resale of the helmets at a very reasonable price of $25 per helmet. Sales went well.

Due to space limitations and the fact that helmet prices have come down, Gannett no longer provides helmets for sale. Instead they provide a list of local vendors where people may purchase helmets, along with a copy of an informative helmet brochure.

**Helmet brochure**

Another task was the development and preparation of an informative helmet brochure. The result was a very simple brochure outlining why helmets are important, what to look for when buying one and where to go to purchase one. One section included the testimony of a former student and local cycling advocate about his experience with crashing while wearing a helmet. It concluded with the phrase ...“You’re an Ivy League student. Use your head; protect your investment by wearing a bicycle helmet every time you ride.”
Student involvement

Student volunteers who were recruited through the health center’s volunteer program were trained in how to fit a helmet to health center customers interested in buying a helmet and how to respond to commonly asked questions about helmets and sizing procedures. The agenda in the appendix provides more details regarding the elements of the training session.

A SHAC volunteer hands out the Bike Right quiz to passers-by.

A student organization, Student Health Alliance at Cornell (SHAC) was also approached. It seemed astute to involve a student group in efforts to reach out to the student community. This group was selected because it was comprised of students with an interest in a medically-related career and proved to be a relatively successful component of the project. They were actively involved in public displays and successful at getting fellow students to take the quiz and register to win free prizes. For the most part SHAC members were not cyclists, excepting a couple of the more active participants.

Publicity about the helmets available at Gannett occurred as an integral part of the overall public awareness efforts of the bicycle project. This included the development of an exhibit panel that was part of the Bike Days display, articles in the campus newspaper and health center newsletter, and posters that were widely distributed.