

Market segmentation of cyclists – understanding attitudes toward safety

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Abstract:

Cyclists are among the most vulnerable road users. Between 2006 and 2010 an average of 457 cyclists were seriously or fatally injured in Victoria each year. To address their vulnerability, VicRoads commissioned a research project on market segmentation of cyclists in Victoria, to inform the development of a communications strategy to cyclists and other road users to look out for each other. The project is consistent with the safe system category – safe road use, aiming to encourage safer use of the roads by cyclists, and by other road users when interacting with cyclists.

Stage 1 identified segments through qualitative and quantitative research. Stage 2 was qualitative research involving focus groups with cyclists, in depth interviews with cycling organisations and ethnographies to identify messages, tone and communication channels/methods for each segment to influence safer cycling.

Stage 1 identified three segments who differed by frequency of cycling, their motivations for cycling, how they cycled and their attitudes toward safety. Stage 2 results gave an indication of the type and tone of messaging as well as how to communicate these to cyclists.

The paper will address in detail the key considerations for the three different segments which will be used to develop and implement a safe cycling campaign.

Keywords:

Cycling, bicycle, cyclist, segmentation

Introduction:

Cycling is becoming more popular Australia wide. Census data shows an average 28 per cent increase in cycling trips to work in Australia between 2001 and 2006¹. In Victoria recent counts in Melbourne show that commuter cycling has increased annually by 10 per cent on key routes between 2006 and 2010². Bicycle sales are also increasing; 2010 was the 11th year in a row that bicycle sales in Australia have outstripped cars and the 9th year in a row they have exceeded one million, with statistics showing there were 1.3 million bicycle sales in 2010³.

In the last five years, averages of 457 cyclists were seriously or fatally injured on Victoria's roads⁴. The five year average of cyclist fatalities from 2006 to 2010 is 8.6. The five year average of cyclist serious injuries is 449.

In September 2009 the Victorian Cycling Strategy was released. This strategy includes both initiatives to increase the number of people cycling in Victoria as well as measures to make cycling safer for everyone. There are five strategic directions:

- Build networks to connect communities
- Promote and encourage a culture of cycling
- Reduce conflicts and risks for cyclists
- Better integrate cycling with public transport
- Integrate cycling into land use planning

Within strategic direction 3, 'reduce conflicts and risks for cyclists' there is a priority action to develop a cycle safety campaign aimed at cyclists and other road users to clarify cycling related road rules, foster positive and mutual respect between road users and undertake more targeted enforcement. The research this paper describes was carried out to inform the development of this campaign for cyclists and other road users to gain insight into the types of cyclists there are and identify the best ways to communicate with them which is planned for spring 2011.

In July 2010 VicRoads commissioned a market research agency to undertake a research project to identify the different types of cyclists in Victoria. The initial research identified the segments that exist in the cycling community. The second stage of the research identified the communication needs of these segments, particularly how to communicate with them to promote safer cycling.

Method for Stage 1

The segmentation of cyclists (stage 1 research) was identified through a small explorative qualitative study and then a larger quantitative study. The qualitative exploration stage involved 12 depth interviews with cyclists who rode a bicycle. The interview included a discussion about the types of bicycle(s) they rode, accessories they use when riding, and maintenance and storage of their bicycle(s); what a typical bike ride looked like for them; and where they would choose to ride, such as on the road, footpath, shared path. The discussion also included what they thought about safety and how they might minimise their risks as well as their impression of other cyclists and road users when riding. The findings of the depth interviews then fed into the development of an online questionnaire for the quantitative research.

The quantitative research was designed as a 15 minute online questionnaire. The survey sought information about the respondent's patterns of cycling; their attitudes to cycling, such as perceptions of risks and road rules, self assessment of speed and risk taking, reactions to specific situations, such as red lights, riding with a bicycle helmet, riding on the footpath; as well as information channels they might access, in relation to cycling and more generally. The survey also sought information about their demographic characteristics. The sample size was 1000, they had to be aged 16 years and over and must have cycled once in the last 12 months. The quotas for age and gender included: 65 per cent male and 35 per cent female; 16-34 years: 50 per cent; 35-54 years: 40 per cent; 55+ years: 10 per cent. These quotas were determined by the proportion of male and female cyclists and the proportion of age groups from the Profile of Cyclists in Victoria⁵. Respondents were recruited through a panel used exclusively for market/social research purposes.

The market research agency undertook both factor analysis and cluster analysis of the responses to the online survey to identify the key cycling segments in Victoria.

Factor analysis is a statistical technique used to reduce the complexity of large datasets to a set of factors⁶ (i.e. themes). In this case it was used to identify key themes such as risk elements, love of cycling, cycling as a form of transport and the type of gear the cyclist owns.

Cluster analysis was used to identify segments – this is a statistical technique that identifies clusters of cases (in this case cyclist) with statistically significant similarity of characteristics and with each cluster being unique and distinct from the other clusters⁷.

Results of stage 1

During the segmentation process five segments emerged repeatedly to different extents. However, the strongest solution was a simple one which resulted in three segments only.

Prior to undertaking the analysis, both VicRoads and the market research agency had expected more segments to emerge through the analysis of responses. However they were unable to identify any more than three that met the criteria of being clear, easily understood and of a meaningful size.

The three segments identified in the process were:

1. Let's go for a ride (LGFAR)
2. This cycling life (TCL)
3. Catch me if you can (CMIYC)

Let's go for a ride

This group represented the majority of cyclists, at 75 per cent. They generally ride for pleasure, only when it suits. They are quite risk averse and would tend to ride off road and on quieter roads. They are more likely to be families. They don't ride often

and usually only in the warmer months. They are very conscious of the road rules. They drive a car on most days.

This cycling life

This group represented 20 per cent of Victorian cyclists. They ride their bicycles regularly and cycling is central to how they live. They will ride in a variety of conditions (day, dark, wet, etc.) and all types of roads. They are generally respectful of the road rules, however, they may break the road rules but only when they believe that it doesn't pose a danger to any other road user. They are less likely than LGFAR to drive a car regularly.

Catch me if you can

This group were only 5 per cent of Victorian cyclists. They are confident, active, competitive, and speed focused. They consider themselves to be confident or calculated risk takers. They are twice as likely as the other segments to believe that most rules don't apply to cyclists. It is important to note they are only a small proportion of the cyclists on the road but are regular cyclists so may be seen quite often (particularly more than LGFAR). Within this segment there were two distinct age groups: the first being the majority, under 35 years and could be defined as a more 'reckless' version of TCL. Like TCL they use their bicycle to commute, shop, socialise, but also to race (not just competitively but against mates etc.), and often at high speeds. The second age group are a bit older, they usually cycle during the weekends in groups of four or more, they race, more often with friends than with a club. They are more likely to cycle for exercise and fun, and they are more likely to wear brightly coloured cycle wear than the younger aged CMIYC cyclists.

Methods for Stage 2

The next stage was undertaken to:

- Uncover the most compelling message for each segment to encourage safe cycling
- Establish the tone to deliver the message
- Determine the right channels and methods to disseminate the messages
- Use the findings to deliver a cycle safety campaign

This stage comprised three techniques: self guided ethnographies with cyclists, two from each segment; discussion groups with cyclists from each segment; and in depth interviews with representatives from bicycle user groups (BUGs) and similar organisations.

Ethnographies:

Ethnography is a video technique which involved respondents using a video camera to record what they actually do when cycling and preparing to cycle. The participants in this stage included four males and two females, two participants per segment. They used the camera for six days, including a weekend, to create one hour of footage. They also participated in a 45 minute interview where they were guided through the footage they had collected and discussed their cycling behaviour, attitudes toward cycling safety and information about cycling safety. These ethnographies provided a more intimate and genuine picture of individual approaches to cycling from cyclists in

each segment, such as motivations and social influences. This provided valuable context for the discussion groups.

Discussion groups:

Each group included 4-6 participants and the discussion lasted an hour and a half. The groups included cyclists that fitted into one of the three segments:

- Four groups with CMIYC – under 35 (all male)
- Two groups with CMIYC – over 35 (all male)
- Four groups with TCL (two male groups and two female groups)
- Two groups with LGFAR (mixed male and female in both groups)

Key issues discussed within the groups included how they feel as cyclists, what they think about other cyclists and other road users, barriers to cycling, what safety means to them, are there rules for cyclists, how can they (or others) improve safety. The groups also discussed influences and information sources, including actual cycling safety materials, which they might use to find out more information about cycling and safety.

In depth interviews:

Five representatives, mainly from BUGs, and a cycling educator were interviewed. The objective of these interviews was to understand their willingness and ability to act as communication conduits for VicRoads information to Victorian cyclists. Questions covered similar issues to the discussion groups as well as how they communicate with their members, and whether they discuss cycling safety and promote safe cycling behaviour with their members.

Results of Stage 2

The findings of this research identified key safety issues for cyclists. It also highlighted the attitudes of the different segments of cyclists to their interpretation of safe cycling. The three components during this stage also ascertained the key influencers for each segment and what the barriers to change and the likelihood of change are in regard to safe cycling behaviour.

It is important to note that a key point from the report was that safety is seen as a relative term based on conditions when cycling and is a matter of experience and judgement. Cyclists' opinions are not likely to be changed easily.

Key safety issues that should be addressed for all cyclists were identified as "legitimacy" and "sense of a cycling community".

"Legitimacy" was highlighted in the research by cyclists' concept of a social contract between road users. That when riding a bicycle (or driving a car etc.) one should do the right thing on the road to earn the respect of other road users, as opposed to doing the right thing because it is a road rule and you will be punished if you don't.

"Sense of cycling community" showed that while there were different segments of cyclists and that people ride for different reasons they would feel united with other

cyclists because they are often frustrated by the actions of other road users and that they aren't seen as legitimate users of the road.

Communication requirements for each segment:

Let's go for a ride:

What defines LGFAR is that they ride for leisure and are generally risk averse. They are courteous on and off road cyclists. Their barrier to change is that they may often have a low skill level and see that other road users will create risky situations. They can be engaged by showing all road users doing something together. Their key points of influence are their local networks, i.e. family, friends and schools. The appropriate cycle safety message should be focused on being caring on the roads and that safety is about joint responsibility and respect between road users. The key channels they will use were identified as Victoria's cycling safety authorities (i.e. VicRoads, Bicycle Victoria, and local councils) and they would respond to TV, online and print materials about being a safe cyclist. The tone should be informative and reassuring. While they aren't likely to change given they are already risk averse we need to make sure they maintain their safe cycling behaviour as they increase their skill levels. Their biggest fear and frustration about cycling is that they are intimidated by dangers on the road, as well as their lack of skills and confidence. This is the only segment that is likely to seek out the official road rules for cycling.

This cycling life:

The defining attitude of TCL is that cycling is considered a right and responsibility. TCL identify the key safety issue for all road users as predictability. They are not likely to be the leaders of change but will follow the rest of the cycling community. They are likely to be more engaged through showing a sense of consequence, i.e. a fear or threat of breaking the code. Their influencer is the cycling community, i.e. watching what other cyclists do on the road or cycling groups, such as a BUG that they are a member of. The message delivered to TCL should be one of encouragement and support and leverage the community of cyclists. The key channels they will use to access cycling safety information are online resources, such as the urban cyclist website, Bicycle Victoria or VicRoads; online bicycle retailers; and face to face events. The tone of the message should be inclusive, particularly focusing on leveraging the cycling community; however, it should lack emotion. The key to cyclists in this segment actually changing their behaviour is that the message needs to show a reciprocity between other road users, i.e. that the message is not just aimed at cyclists to be safer on the road. Their biggest fear and frustration is the constant battle between cyclists and motorists and in particular looking out for car doors.

Catch me if you can:

One of the key differences between TCL and CMIYC is their defining attitude. CMIYC see their relationship with cycling is that it is "*me against the rest of the world*"⁸. They ride defensively and identify this with being safe. They will be the most difficult to influence to change their behaviour- they believe that their judgment when cycling is more important than them needing to conform to cycling rules. CMIYC will be best engaged through messages of solidarity, legitimacy and mutual respect. Their key influencers are other cyclists, cycling authorities and online media, particularly blog websites. Messages need to be aimed at both cyclists and motorists, the messages for cyclists should come from other cyclists and messages for motorists should come from other motorists. Channels for delivering safe cycling messages were identified as word of mouth, observations on the road, and credible sources of

information, which they identified as online blogs. The tone should be peer to peer. This segment is the least likely to change their behaviour, however, 'the power of the group' will have the best effect. Their biggest fear and frustration is being dismissed and considered as less significant on the road.

Developing messaging:

While all three segments have quite different attitudes, triggers, and barriers, the fundamental element is the same, all cyclists wish for improved respect from other road users and to be seen as legitimate road users.

Messages aimed at cyclists should include the importance of being predictable and concentrating on the road when cycling, it should also consider the social contract, i.e. if a cyclist breaks a road rule it can damage the respect for all cyclists, and importantly that respect is a two way street, motorists deserve respect from cyclists as well.

Messages aimed at drivers should include legitimising cyclists (they have every right to be on the road), humanising cyclists (that they maybe your neighbour, sister, dentist), understanding their positive contribution to the road (i.e. help reduce congestion), and also understanding the difference in view that a cyclist has on the road compared to the view that a driver may have.

Communications checklist:

The research identified a checklist to consider communications needs when developing any cycling safety related campaigns. The key elements of the checklist have been outlined here:

- Create a comprehensive campaign aimed at all road users, not just cyclists.
- Establish the legitimacy of cyclists and their rights as road users.
- Challenge driver perceptions of cyclists.
- Humanise the cyclist.
- Single-minded and clear ideas, about cyclists' safety.
- Create triggers and touch points to encourage novice cyclists to seek basic safety information.
- Draw in and engage cyclists.
- Ensure stand out and memorability to obtain cut through.
- Uniqueness of the campaign is important to engage audiences.
- Relevance is critical in reaching hardened targets who think they know it all.
- Messages need to be credible if they are to have impact and power.

Conclusions

The segmentation analysis initially identified three segments of cyclists in Victoria. Further research delved deeper into the segments to identify the appropriate message and tone as well as the best way to communicate this message to the three groups.

The research has identified a number of effective ways to communicate with cyclists, both by the three segments but also generally to all cyclists.

Recommendations

This project has provided an understanding to develop a communications campaign to foster positive and mutual respect between cyclists and other road users and to clarify cycling related road rules.

Any campaign which has a focus on safe cycling should be comprehensive and aimed at all road users, not just the cycling community. Messages in a cycling safety campaign should include that cyclists are legitimate users of the road and deserve the respect of other road users. Safe cycling and safe interaction with cyclists by other road users is best encouraged by the modelling of the desired behaviour on the roads.

For any communications to be successful with cyclists it will need to include face to face and social media peer led behaviour modelling as well as an increased focus on penalties.

References

¹ Census 2006

² VicRoads website:

<http://www.vicroads.vic.gov.au/Home/Moreinfoandservices/Bicycles/StrategicDirectionsForCycling/CyclingDataAndStatistics.htm>

³ <http://www.cyclingpromotion.com.au/content/view/509/9/>

⁴ VicRoads Road Crash Information System

⁵ Profile of Cyclists in Victoria, Roy Morgan, April 2009 – March 2009

⁶ Cyclist segmentation research, October 2010, pg 14, Hall & Partners Open Mind

⁷ Cyclist segmentation research, October 2010, pg 14, Hall & Partners Open Mind

⁸ Cyclist segmentation research – communicating with cyclists, February 2011, Hall & Partners Open Mind