

TRAILS RESEARCH: WHERE DO WE GO FROM HERE?

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Abstract: This paper describes a recent study focusing on trails research needs. This study was supported by American Trails. Using a Delphi technique, 86 trails experts representing a variety of federal, state and local agencies, nonprofits, and trail uses were queried by email on trails research needs. A Delphi technique is a prognostic tool for dealing with complex problems or issues. The project took place in three phases: Initially, individuals were chosen to participate in the study (expert panel) and respond on the type of trails research that is needed for the future. More than 200 comments were returned covering a plethora of topics, i.e., assessing physical impacts to establishing a national information clearinghouse to trail design. This information was analyzed using content analysis. Secondly, a list of 65 trails research items was sent back to the panel to be rated by level of importance, 1=Not at all Important, 10=Extremely Important. Response rate was 87% (n=75). Thirdly, after these responses were entered and scored, they were sent to the panel for final review and commentary. An overview of the findings show that the panelists rated several trails research needs as very important including values of trails to the community, economic impacts, and trail usage and demand. Results will be highlighted along with a discussion on the topics of research funding, information dissemination, and a national agenda for trails research.

Introduction

The body of literature on trails has largely been concentrated in several general areas including: trail users, (motorized, mountain bikers), benefits (personal, economic), management (training, type of use), construction and maintenance (bridge building, erosion prevention) and planning (public involvement, standards). In examining this growing body of literature in more detail, it has some limitations, because it is agency specific, lacks rigor, tends to be parochial, and often times, the actual studies can be very difficult to obtain (Schuett & Seiser, 2000). In examining the literature specifically on *trails research*, a few studies have been done by specific agencies concerning their own types of trails and needs. For example, in 1996, the National Park Service compiled a list of suggestions for trails-related research. The topics that were put together by managers focused on design, layout, construction, use patterns and facilities. In the fall of 1999, the Interagency Trails Council, spearheaded by the

Bureau of Land Management, conducted a needs assessment to examine trail training needs and opportunities (Bureau of Land Management, 2000). As a result of this needs assessment, the National Trail Training Partnership (NTTP) was formed to address specific tasks that were identified on trail training programs, courses and information dissemination. However, the trails research information that is available is limited and has not been conducted across all parties involved including federal, state, local managers, users, and trails groups.

Purpose

The purpose of this study was to obtain information from trails experts in the field about the types of trails research that is needed for managers. This research was based on two pilot studies conducted at conferences in 1998, one at the National Trails Symposium and the other, the National Association of Recreation Resource Planners.

Method

This study used a Delphi technique to obtain the information on trails research from trails experts. The Delphi technique is a consensus-building tool used for futures research (Dalkey, 1969). This technique is a method of forecasting based upon the collective opinion of knowledgeable experts using several rounds of information gathering. The Delphi has been popular forecasting method since its inception in the mid 1950s and was been used in several areas in the recreation and parks literature (see Young & Jamieson, 2001 for a Delphi review). An overview of the Delphi process is as follows: a working problem is identified, individuals are selected who will be part of the Delphi panel, a pre-determined number agree to participate and the researcher uses multiple rounds of questionnaires to collect these data.

In this study, a first round questionnaire was used in an open-ended format to identify trails research needs. The panel chosen for inclusion in the study was made up of trails experts who were involved in a managerial or supervisory capacity with all types of trails and agencies. Names were obtained from a variety of sources including conference attendance lists, the trails literature, referrals, workshop organizers, academics, and personal knowledge from the researcher. Initially a list of 100 experts were contacted with a final list of 86 individuals agreeing to participate in the study.

Data were collected using an electronic survey, through the use of individual email addresses and a website. The electronic survey format was chosen for several reasons including time, efficient administration of the questionnaire, and ease of data entry. Three rounds of data collection was used in the Delphi process.

Results

In the initial round, the panelists were asked to list trails research needs. Individuals obtained the questionnaire in two ways to facilitate the process, via email in the body of the

message or by access to a website using a password. Results from this round, yielded over 200 comments. These comments were then recorded, categorized using content analysis, and put together into a structured questionnaire for comment. These items were checked for reliability using outside experts. The questionnaire had a total of 65 trails research items representing several areas including benefits, management and impacts. In the second round, these items

were rated on an Importance scale from 1-10, 1= Not at All Important to 10=Extremely Important. The third round had respondents examine the final results giving comments as needed. Overall response rate was 87%, (n=75). The results of the top ten items in the Delphi process can be found in Table 1. The items that received the highest overall score (between 7-10) by at least 70% of the respondents are listed in Table 1.

Table 1. Top Ten Research Needs

Research Need	Percentage*
Values of the trail to the community	85
Economic impacts of a trail to local communities and adjacent landowners.	83
Trail usage and demand on local, state, regional, and national levels.	83
Affect of educational / informational programs on reducing user conflicts on multiple-use trail	79
Impacts of trail design, type, and use on natural resources (flora, fauna, and environment).	77
Assessment of adjacent property owners' perceptions of a trail.	77
Impacts of multiple use on trail user experiences.	76
Volunteer groups' trail maintenance and monitoring programs.	76
Health and quality of life impacts on trail users.	73
Implications of permitting additional forms of trail use (equestrian, trail bikes, etc.).	72

* reflects items in the 7-10 range

Discussion and Implications

The purpose of this study was to establish and obtain feedback from trails experts on research needs. The strength of the results lies in the varied backgrounds of those chosen for the study including trails in federal, state, and local areas. The findings are limited to those experts who decided to participate in the study and the items used in the Delphi process. Nonetheless some degree of generalization is appropriate given the fact that trails research priorities have limited availability on a national scale. It is clear that several of the items in the study emerged as important establishing some patterns to consider in future research. In highlighting some of the results, values of the trail to the community emerged as the most important item on the least. The value of a trail can be concrete measured through increased property values and economic impacts or more subjective as in place

attachment and benefits. This item although difficult to measure at times, is a powerful force for trail users and communities. More information is needed about how these values can be measured and determined. Specific types of values were also expressed as important including health and quality of life issues. Managers are clearly looking for more information about the personal values of trails to individuals and communities. Impacts, economic and physical, also surfaced as an important group of items. Economic impacts and property values are a continual concern for communities to justify trail creation, maintenance and construction. For many communities a new trail can add "life" to a community. More tangible outcomes, economic impacts outcomes are something concrete that can be measured and can be very helpful in trail creation and promotion. Several studies have outlined the economic impacts of trails (Moore & Barthlow, 1998) but obviously more are needed.

Considering the increased usage trails are experiencing now and in the future, (Cordell, 2001) along with new and varied uses (e.g., mountain bikes, motorized vehicles), more studies about physical impacts are also needed. This finding on resource impacts also relates to the need for more information about participation trends. Numerous agencies and states are collecting more pertinent information on participation patterns and trends as they incorporate these data in their trail plans. However, this type of data can be expensive, difficult to obtain and time consuming to collect and interpret.

It is clear that managers from a variety of areas representing many different types of trail users feel trails research is important and have specific needs. The needs are diverse, varying from demand trends to resource information. Yet the needs are there and a unified effort amongst the trails community needs to be considered in creating a research agenda. Funding issues can often be one of the reasons research is not done which is compounded by historically low budgets on a federal and state level. More partnerships need to be created with the public, private and third sector (nonprofits) in order to make more funds available for research. The availability of information can be problematic, too. The research that is being conducted is often times agency specific, lacks application or goes unpublished, and therefore may not be widely disseminated. Some information clearing houses have been set up by mostly by non profit trail groups on the Internet making current studies available, i.e., American Trails, National Off-Highway Vehicle Conservation Council, Inc., International Mountain Biking Association and South Carolina State Parks. A research agenda put forth by a national group such as American Trails or drafted as part of a Trails Summit should be put forth in conjunction with federal, state and local agencies and private industry. This is a topic that should be strongly considered for future Trails Symposia.

The dissemination of this research could also be improved by the creation of a journal more exclusively for trails. At the present time, trails research appears in a number of journals from recreation and parks to landscape architecture. None of these periodicals have the title of "trails journal" and one may need to be created and supported from a wide constituency. In this way the information could be made available to all types of managers from basic research to action research. In closing, as trails continue to become more important and intertwined into the fabric of our lives, more information will need to become available to address and improve the management, construction, demand, and impacts of trails everywhere.

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